

BIOPHILATELY

OFFICIAL JOURNAL OF THE BIOLOGY UNIT OF ATA

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What does DNA stand for?

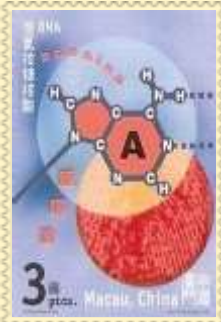
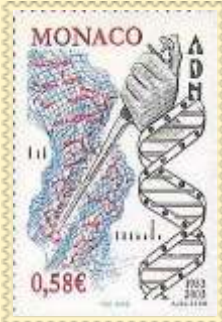
...National Dyslexics Association



Victor G. Potter

Man and Microbes

More Inside >>



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Electronic versions of back copies of *Biophilately* are available on our website, or from the Librarian on request. Please contact the individual associate editors if you have queries about the content of their columns.

Send membership enquiries and change of address notices to the Secretary, Chris Dahle, (319) 364-4999, address at left. See the following page for dues rates.

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The purpose of this journal is to provide members with informative articles dealing with biological topics and to publish listings covering the new **zoological** and **botanical** issues of the world, identified and classified to the best of our ability.

Please send letters, comments on the journal, articles, or new material to the Editor (data above). The Publisher will handle requests for issues from the current year. Contact the Librarian (address above) for copies of all other issues.

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PLEASE NOTE: Material for the next issue should be in the hands of the Editor before 15 February 2018.

FROM THE EDITOR'S DESK

Another year has come to a close and I imagine that, like me, most of you are looking around wondering where all the days went. Now that I am fully retired, many days seem to be a repeat of the day before. Although I could generally set my own schedule when I was working at my paying job, now I am truly free to do whatever I want.

Fortunately, I enjoy a hobby that pretty much is limited only by imagination and I flatter myself that my imagination is right up there with the best. For I find that I will **never** run out of projects (as the piles of things I am “working on” clutter most of the flat surfaces in my house).

In this issue, we continue the three-part article on the International Botanical Congresses by Dr. John Gray. Also we have at last an article in the microbiology arena by Victor G. Potter, “Man and Microbes,” that details some of the history of the discoveries of disease-causing microorganisms.

Our intrepid publisher and Herpetology editor, Dick Roman, is enjoying spring in Antarctica. So we have no column on Herpetology in this issue. And you may have to bear with us as Chris Dahle and I figure out how to get the printed copies of this issue to all the subscribers.

It is not too early to start planning for the 2018 National Topical Stamp Show, which next year will be held as a joint show with the American Philatelic Society's StampShow in Columbus, Ohio, 9–12 August 2018. This joint show will undoubtedly be the largest exhibition in the United States in 2018. The organizers from both the ATA and APS are expecting more than 100 dealers. There will be multiple philatelic society meetings (including our own Biology Unit meeting), live auctions, and multiple first-day-of-issue ceremonies for new stamps.

Of course, there will also be several thousand pages of philatelic exhibits of all types. The ATA and APS will host separate exhibitions with both groups having World Series of Philately (WSP) status. This show will also host the annual APS Champion-of-Champions competition for the Grand Award winners at each of the WSP national shows.

The Biology Unit has accepted the challenge of creating a humorous non-competitive one-frame exhibit using the theme “What Does [your topic] Do in its Spare Time?” We already have pages for Beavers, Butterflies, Chickens, Cockroaches, Frogs, Pelicans, Stegosauruses, Tomatoes, and Trees. They are all hilarious and I think this exhibit will be a real viewing treat. If you would like to get in on this project, contact me (see inside front cover).

Also, the ATA is seeking competitive exhibits for this show. Check the ATA website as details and application forms become available.

As the New Year looms, it is time to renew your membership. I have attached a renewal form to this edition for your use. Your address label indicates the year your membership expires. Several members are in arrears. Please send your dues to the Secretary. For our Life Members, we welcome your donations as well.

Please accept my best wishes for a terrific holiday season and a prosperous and healthy New Year.

Jack R. Congrove



DUES RATES (US\$)

| | |
|----------------------------------|------|
| Regular membership (US & Canada) | \$20 |
| Overseas membership | \$25 |
| Overseas airmail (add) | \$10 |
| On-line membership | \$15 |

ADVERTISING RATES

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| Full page insertion | \$20 |
| Half page insertion | \$10 |
| Quarter page insertion | \$5 |

Please see the Biology Unit website (www.biophilately.org) for membership applications. Several payment options are available. Send applications and payments payable to the Biology Unit of ATA to: Chris Dahle, 1401 Linmar Drive NE, Cedar Rapids, IA 52402

PRESIDENT'S MESSAGE

I'm sitting in the kitchen with my morning mug of tea. Looking out at the frost covering the grass, I realize winter is on the way. The television and malls remind me that Christmas is almost here as well.

Winter is a great time for me to get out my stamps and organize the multiple topical collections. With all the animals I collect, I need to work on getting some order to the pages.

As Christmas approaches, so does the New Year. It is a time of reflection and resolutions for the coming year. What a great time to resolve to reorganize your collection, work on a new exhibit, or get a friend started on a biology themed collection. Maybe as you are going through the boxes of "extra" stamps you could start a new collection as well. Those cute Red Squirrels and Otters keep calling my name.

I want to wish you all a wonderful Thanksgiving, Merry Christmas, Happy Chanukah, and Blessed New Year.

Laurie Ryan



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SECRETARY-TREASURER'S CORNER

NEW MEMBERS

The Biology topic is immensely popular. It is likely that someone in your local club is a collector of something related to zoology or botany. Sign them up. The Biology Unit welcomes the following new members:

1887 Drew L. Kershen, Norman, Oklahoma plant breeding, DNA/RNA, biologists
 1888 Vera Radnell, Labrador, QLD Australia raptors, fish eagles, falconry

The following member has been reinstated:

1664 Richard Rosche, Orchard Park, New York birds, butterflies

HAPPY MEMORIES

Alan Hanks, President Emeritus, BU698

After I emigrated from England to Canada, got married, and started a family, I was looking for something to occupy my spare time. I remembered that my mother had collected stamps and decided to “give it a try.” I started with Australia, as there was a dealer in Toronto who was Australian and had a pretty good stock. I very quickly discovered that there was more to collecting than just accumulating a “bunch of stamps.”

Also, I quickly discovered that a quite large financial outlay would become necessary in order to have a semblance of “completeness.” So, I got rid of Australia and thought I would try Switzerland, as they had stamps that were very well printed and were quite colorful. Needless to say, the Australian experiment looked as though it would be repeated with Switzerland.

But by this time I was subscribing to *Linn's Stamp News* and saw a short article on the “Biology Unit” of the American Topical Association (ATA). This sounded interesting, so I sent in my membership fee and quickly found out that this was a completely different idea about “what to collect.” When the first copy of the unit journal arrived, I found out there was a collector right here in Toronto, Bruce Cruickshank by name, whose interest was in birds. Contact was made and he quickly pointed out the advantage of having a journal that included new issue listings and articles on a large number of biological subjects.

I chose butterflies and moths (later all insects) as my collecting subject and started accumulating material, with Bruce advising me to avoid the Arab countries as not being suitable for a “serious” collection. Bruce phoned me one day in 1976, and asked if I would be interested in driving with him down to Philadelphia for an International Show, since the ATA would be holding their annual show in conjunction with the larger show.

Needless to say, I was amazed at the many frames of material displayed in a large hall, covering many subjects and including those with a “topical” connection, which at the time were the most interesting to me. I also was persuaded to join the ATA and attended their annual meeting. This visit to a major stamp show gave me lots of things to think about, including whether I could even contemplate doing an exhibit myself (in the future of course).

Coincidentally, my wife and I had already made plans for our holiday in 1978, to consist in taking our tent trailer down the U.S. eastern seaboard, especially since both our children loved the sea and swimming. As luck (?) would have it, the last few days would be near Atlantic City, where the ATA was holding their annual convention, with my first Biology Unit meeting included.

This turned out to be good fun, as I met Sally & Jerry Husak of the ATA and several Biology Unit members. During the Unit meeting, it turned out that a new treasurer was required and I volunteered for the position. Later there were some mumbles about the exchange rate, but at that particular time, the exchange rate was in favor of the U.S. and the mumbles disappeared. I had inspected all the exhibits at the show, so I was beginning to get an inkling of what “topical” or as it later became known as “thematic” exhibiting was all about and set out to accumulate material with that aim on “the back burner.” (to be continued)

NEWS OF NOTE

ATA WEBSITE WINS APS AWARD

The website of our parent organization, the American Topical Association (ATA), received a Gold award in the 2017 American Philatelic Society Website Award Competition held during the APS StampShow in August. The award recognizes website excellence.



The judges for this competition were Judy Johnson, Manager of Membership Administration for the APS; Donald J. Chenevert, Jr., Chairman of the Young Philatelic Leaders Fellowship Advisory Board; and Lloyd A. de Vries, host of The Virtual Stamp Club and Associate Editor of *The Philatelic Communicator*.

The award includes a certificate and an electronic badge for display on the website. The ATA Webmaster, Amanda Morgenstern, is an award winning graphic artist and designer. She is also a Director on the ATA Board.

Some of the jury comments include: “Exceptional website. Up to date, colorful, informative, content rich, engaging...everything you want in a media resource.... Bonus points for downloadable kids pages! Excellent site overall.”

Take a moment to visit the ATA website at: <http://www.americantopicalassn.org/home.shtml>.

DISTINGUISHED TOPICAL PHILATELIST

The ATA is soliciting nominations for its highest award in 2018, the Distinguished Topical Philatelist. The honor is awarded to a person who has made significant contributions to topical philately, and to the ATA in particular.

Send a letter of recommendation describing the person’s contributions to Jean Stout, P.O. Box 98174, Pearl, MS 39298-8174, to arrive not later than 31 December 2017. The award will be presented at the joint APS-ATA stamp show in Columbus, Ohio, 9–12 August 2018.

LETTERS

Dear Mr. Congrove, I received my latest *Biophilately* journal and was quite happy to see a new series included on “International Botanical Congresses” by Dr. John Gray. It appears a worthy follow-up to the wonderful series on “Alexander von Humboldt” by Dr. Lyman R. Caswell. A sincere thank you goes to both authors for thoroughly enjoyable and educational writing. Best regards, Fran Adams.

(*via email*) You have been sending me two extra copies of every issue of *Biophilately* for use at ATA tables at the ASDA show in New York and NOJEX in New Jersey. Over the past several years I think that I have only recruited one new member for the Biology Unit. I think we should stop sending me the extra two copies as it doesn't seem to be cost effective.... One of the problems with the print version of *Biophilately*, as has been mentioned at several of our meetings at NTSS, is that people who collect one biology topic do not want to receive a printed journal that includes a number of other biology topics. Regards, Fred Skvara.

[*Ed. Note. I can understand the views of these members. However, since this is a journal for the entire Unit, we must continue to publish the variety of topics we currently include. If members desire to receive only the portions of the journal in which they have an interest, then the website offers this option. Still, we will try to include interesting articles in a variety of subjects that may enlighten the reader even if they are not exactly in their area of collecting interest. As a modest proposal, if readers wish to see more articles about their topic, then they should submit some for publication.*]

SEAPEX 2017

Jack R. Congrove, BU1424

The Seattle Philatelic Exhibition (SEAPEX) held its annual exhibition on 8–10 September at the Tukwila Community Center near the SeaTac International Airport. This was its third year as a World Series of Philately (WSP) show.

The exhibition had 193 frames of competitive exhibits and 29 dealers in its bourse. It also provided a venue for



three convening society meetings, several local chapter meetings, a United Nations Postal Administration (UNPA) “pre-launch” stamp ceremony, and other philatelic activities.

Despite competing with the warm late-summer weather, the opening week of the Washington State Fair, and the start of college and professional football seasons, the show drew excellent attendance. Dealers experienced strong business activity with several dealers reporting excellent sales; one even reported he had his best show ever.

SEAPEX was pleased to host the conventions of three national level philatelic societies: China Stamp Society, Society for Hungarian Philately, and Society of Australasian Specialists/Oceania. Each society held their annual meeting and their members entered many top-notch exhibits.

This year SEAPEX celebrated the 100th anniversary of Camp Lewis, Washington as its theme. The camp was constructed in 1917 as an installation to train soldiers for action in World War I. The camp, including 1,757 buildings, 422 other structures, roads, utilities, and rail spurs, was built in an amazingly short period of only 90 days. A ceremony was held on Saturday morning to commemorate Camp Lewis and its continuing contributions to our nation’s defense.

In addition to the Camp Lewis celebration, the UNPA invited SEAPEX to host a joint “pre-launch” ceremony in conjunction with the Nanjing show in Beijing, China and the Prague show in the Czech Republic for its International Day of Peace stamp set.



UNPA representative Mike Cohene (left) and speaker Anthony Dewey unveil the UN designs

The designs included two stamps and a souvenir sheet from each of the three UN offices in New York, Geneva, and Vienna. The official first day of issue for these items was set as 21 September—the actual Day of Peace. However, the UNPA allowed us and the other two shows to sell these sets ahead of the first day. These were very popular items and almost all of the available sets were sold.

The American Topical Association (ATA) was well represented by Ambassadors Carol and Keith Edholm. In addition, the ATA Executive Director, Vera Felts, was able to attend the show on Friday.

This year SEAPEX had a record quantity of competitive exhibit frames. Due to space limitations, the show regrettably had to place several applications on a wait list. The quality of the exhibits was exceptional. Of the 39 separate exhibits, 28 received either a Gold or Large Gold award.

One week prior to the show, the Chair of the philatelic jury had to drop out. The remaining jury members distributed the responsibilities for the exhibits and did an outstanding job to complete all evaluations by the close of the day on Friday. The jury members were: Stephen D. Schumann (chair), Timothy Bartshe, Charles J.G. Verge, Kenneth Trettin., and Stephen K. McGill (apprentice).



Vera Felts helping folks at ATA table

David Patterson won the Multi-frame Grand Award with his traditional exhibit, “New Zealand—The Chalon Issues 1855–1873.” His exhibit also received the APS Medal of Excellence Pre-1900 and the SAS/O Gold Award. This exhibit will be entered in the Champion of Champions competition at the American Philatelic Society (APS) StampShow next year in Columbus, Ohio.

David McNamee received the One Frame Grand Award for his postal history exhibit, “Conquest of the Zulu Kingdom 1876–1897.” It also won the American Philatelic Congress Award. This exhibit will compete for the One Frame Champion of Champions prize at the APS Ameri-Stamp Expo next year in Birmingham, Alabama.

The Reserve Grand Award went to Anthony F. Dewey for “A Postal History of Hartford, Connecticut as US Post Office: 1792–1897.” Bruce Wakeham received the People’s Choice Award for “A Brief History of Wells, Fargo and Company.”

A one-frame exhibit, “Guatemala: The UPU Resplendent Quetzals 1881–1886” by Michael Bloom, received a Large Gold medal. This exhibit contained stamps showing the Resplendent Quetzal (*Pharomachrus mocinno*), the national bird of Guatemala. The bird also appears on the Guatemalan flag and in its coat of arms and lends its name to the country’s currency.

All three of the inverted center errors of these stamps were represented in the exhibit.

David McNamee won the ATA 1st Award for “The Canoe in Pacific Island Culture.” Lyman Caswell received the ATA 2nd Award for “They Came to America.” The ATA 3rd Award went to George Pogosov for “Fragments of the History of Fencing.”

A complete listing of the exhibition awards is on the SEAPEX website (www.seapexshow.org).

Next year’s show will be held at the same location on 14–16 September. The theme will celebrate the 75th anniversary of the Women’s Army Corps.

See the SEAPEX website for registration and exhibit entry forms.



Pharomachrus mocinno
Guatemala, 1881, Sc#25

MAN AND MICROBES

Victor G. Potter, Canada

[Ed. Note: The London-born author is a former military medic who is retired from a career in the emergency medical and first aid field. He is a long-time philatelic exhibitor who has received national level Gold awards for his exhibits in various classes. He has owned microscopes from 1940 to present.]

This article is based on a “Display” type exhibit shown at several stamp shows, both at local and national level, and will examine the role of microbes, both useful and harmful. It will explain the beliefs, from earliest times to the present, relating to the causes of diseases, together with descriptions of specific infections.

Very few stamps actually show microbes, but much collateral material is available, such as famous scientists, scientific equipment, the World Health Organization (WHO), humanitarians, animals, insects, plants, etc. The scientific information included has been greatly simplified, to both inform and entertain the average reader.

In the term “Microbes” I include, bacteria, fungi, protozoa, viruses, and prions. Normally, microbes are defined as being too small to be seen with the naked eye, but one is known to grow to 0.5 mm in length.

For centuries, diseases were considered to be a punishment from the gods, for mankind’s transgressions. Even today, some think that human immunodeficiency virus (HIV) and acquired immunodeficiency syndrome (AIDS) are a punishment from God for immoral behavior.

Others thought that diseases were curses placed on individuals by witches, demons, sorcerers, etc.

Another very popular idea included the “Balance of Humors” within the body: Blood, Black Bile, Yellow Bile and Phlegm. Galen supported this view, and it was not demolished until Virchow’s work. (see later).

However, centuries ago, the idea of microscopic agents as the cause of diseases, especially the infectious types, was postulated. Texts in Sanskrit from ancient India suggested that invisible agents, possibly chemical, might cause disease: Hippocrates (460–377 BC) (Fig. 1) in ancient Greece stated, “Diseases are predictable, and are not caused by the supernatural.” He supported the “Humoral” theory.

The Arabian physician Avicenna (980–1037) (Fig. 2) wrote *The Canon of Medicine* and also suggested that minute creatures were responsible.



Fig. 3. Johannes Wier
Netherlands, 1960, Sc#384

In the first century BC, a Roman, Marcus Terrentius Varro, stated, “If there are marshy places, little animals multiply which the eye cannot discern, but which enter the body through the mouth and nose and cause grave diseases.”

Johannes Wier (1515–1588) (Fig. 3), a Dutch physician wrote *On Demonic Bewitchment, Conjurament, Exorcising, and Poisoning* in 1563, arguing against superstition.

Other writers concerned with anatomy and physiology also helped by providing detailed studies of the human body. Andreas Vesalius (1514–1564) (Fig. 4), a Belgian anatomist, provided detailed drawings (*De Humani Corporis Fabrica*) of every part of the body, while William Harvey (1578–1657) (Fig. 5), an English



Fig. 1. Hippocrates
Transkei, 1982, Sc#97



Fig. 2. Avicenna
Egypt, 1968, Sc#741



Fig. 4. Andreas Vesalius
Belgium, 1964, Sc#606

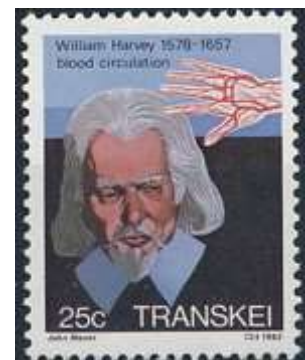


Fig. 5. William Harvey
Transkei, 1982, Sc#99

physician, proved the circulation of the blood. These researches enabled others to identify specific diseases with certain organs, and to show how blood could carry microbes throughout the body.

Air and water had long been associated with the spread of disease, but an Italian, Girolamo Fracastoro (ca. 1476–1553) also suggested that inanimate objects (fomites), “...such as clothes, linen, etc., which although not themselves corrupt, can nevertheless foster the essential seeds of the contagion and can thus cause infection.”

However, all the clever theories regarding microbes could not be proven until the culprits could be seen and studied in detail. A magnifying glass (simple microscope) was considered insufficient for the job until special types were constructed by the Dutch cloth merchant Anton van Leeuwenhoek (1632–1723) (Fig. 6). These instruments consisted of a globular lens, about 4 mm diameter, sandwiched between two silver plates, and had a magnification of about $\times 50$ – 300 diameters. With these, and extremely good eyesight, he was able to observe living cells, which he named “little animalcules.”



Fig. 6. Leeuwenhoek Netherlands, 1937, Sc#B97



Fig. 8. Agostino Bassi Italy, 1953, Sc#640

Robert Hooke (1653–1703) (Fig. 7), an English physicist, used a primitive compound microscope, and published in 1667, *Micrographia*, in which he described microscopic details of plants, insects, etc. He also introduced the term “Cell” to biology as the small parts reminded him of monk’s rooms.

Agostino Bassi (1773–1856) (Fig 8), an Italian researcher studying Muscardine (Silkworm Disease) in 1835, noticed a white material on a dead silkworm, and found by microscopical examination that it was “organic, living, and vegetable. It is a parasitic fungi.” He stated, “Perhaps some of my readers will respond with a smile to my doctrine of living contagions.” In 1844, he published *Sui Contagi in Generale* and stated that “Smallpox, spotted fever, bubonic plague, and syphilis are caused by living parasites, animal or vegetable.”



Fig. 7. Fly (from *Micrographia*) G.B., 1989, Sc#1286

Rudolph Virchow (1821-1902) (Fig. 9), a German pathologist, served on a commission to look into a typhus epidemic in Silesia in 1848, and criticized the government for allowing people to live in such squalid conditions, which he stated had spread the disease so rapidly. He de-bunked the “Humoral” theory of disease; and published his famous work, *Cellularpathologie*, in 1858.



Fig. 9. Rudolph Virchow Hungary, 1989, Sc#3216



Fig. 10. Early Microscopes (1740 & 1845) DDR, 1980, Sc#2124 & 2126

Early compound microscopes suffered severe problems due to both spherical and chromatic aberrations, which led to empty magnification and difficulty in focusing. Generally, early microscopes were used for entertainment, but many amateur microscopists improved both the optics and the mechanical parts (Fig. 10).

The introduction of achromatic lenses and the Abbe sub-stage condenser, radically changed the usefulness of microscopes, and turned them into true scientific instruments. Microscopes manufactured in the mid to late 19th century are still in use and capable of being used for serious study. (Fig. 11).



Fig. 11. Zeiss Microscope (1873) DDR, 1980, Sc#2127

Microscopes (Figs. 12, & 13) have a limit of useful magnification of about $\times 2,000$ due to the wavelength of light rays, and are generally not of sufficient power to show viruses. Therefore, electron microscopes have to be used. Lenses are replaced by magnets to bend rays of electrons instead of light rays.



Fig. 14. Electron Microscope (1938) Canada, 1988, Sc#1208

One of the first successful electron microscopes (Fig. 14) was built by E. F. Burton and his students at the University of Toronto, Canada, in 1938. Enhanced images created by a modern electron microscope can magnify an object $\times 2,000,000$.

The basic types of organisms that cause disease are viruses, bacteria, fungi, and protozoa (Fig. 15).

Viruses (from the Latin for poison or venom) are normally a single strand of nucleic acid (RNA or DNA) within a protein coat (capsid) with projections to assist in attachment to living cells. Viruses are not true living organisms. They can exist outside the host, but can only replicate inside a living cell, using the cell's own resources. When the replication has filled the cell, the cell ruptures, sending more viruses to infect other cells. Viruses may occur in many forms, including spheres, rods, or icosahedrons (twenty faces).

Bacteria are primitive living cells with a loose clump of DNA (nucleoid) in the cytoplasm, with outer coats for shape, protection, and exchange of water, gasses, etc. They may be shaped as spheres (cocci), rods (bacilli), commas (*Vibrio*), or corkscrews (spirochaetes). They may be found singly and in clumps or chains. Some may have flagella or cilia for movement, while others can produce spores for survival: Reproduction is by division.

Fungi. Although most fungi are quite large (e.g., mushrooms), other types may be very small (e.g., yeasts and molds).

Protozoa are true living cells with a nucleus and other organelles in the cytoplasm, and with an outer coat. They may resemble an amoeba or a flatworm.

Prions. These will be mentioned later in connection with "Mad cow disease."

The sizes of microbes, compared with a human red blood cell, are shown in Fig. 16.

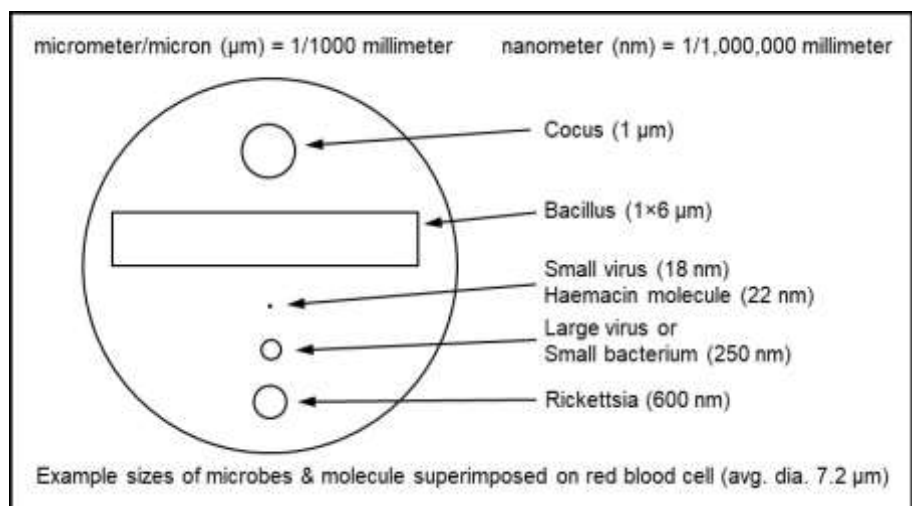


Fig. 16. Relative Size of Microbes

Microbes are colorless and generally have to be stained or coated in order to examine them. This will be explained later when discussing laboratory equipment and techniques.

Before we examine specific diseases and agents, we should realize that harmful types are an extremely small proportion of all microbes. Without microbes to break down dead plants and animals, plus other microscopic forms that produce oxygen, extract nitrogen from air and convert it into nitrates, and many other useful functions, all life



Fig. 12. Light Rays Passing through Microscope Germany, 1968, Sc#980



Fig. 13. Modern Microscope South Africa, 1981, Sc#2127



Fig. 15. Protozoa, Fungi, Bacteria Pitcairn Islands, 1968, Sc#95

on earth would perish. Fifty percent of the world's population relies on rice for food. In paddy fields, the bacterium *Anabaena azolae* produces huge amounts of nitrates, without which the output of rice would be drastically reduced, causing famine (Figs. 17, 18, 19).



Fig. 17. Rice Paddy
Thailand, 1999, Sc#1852



Fig. 18. Wine & Cheese
Canada, 2006, Sc#2168 & 2178



Fig. 19. Yoghurt (*Lactobacillus bulgaricus*)
Bulgaria, 2005, Sc#4362



Fig. 20. Pasteur and his work
Monaco, 1972, Sc#854



Fig. 21. Rabies Injection
France, 1995, Sc#1979

It was while studying some of these useful microbes, that Louis Pasteur (1822–1895) (Fig. 20), a French industrial chemist, who may be said to be the founder of modern experimental medical science, made several major discoveries. He was working on the problem of why some batches of wine became vinegar. This led to a study of fermentation and putrefaction and he concluded that contamination was the problem.

He tested his theory by adding meat broth to long necked glass flasks. He then bent the long necks into a double curve, and heated the broth to drive out all the air. He left the flasks for several weeks, with no signs of putrefaction. But when he broke off the long necks, the broth became contaminated and soon teemed with micro-organisms.

He used heat to kill off harmful bacteria in milk and wine (Pasteurization). This process is still in operation and is used for many other foodstuffs.

When an outbreak of Chicken Cholera occurred, he isolated the causative organism (*Pasturella avisepctica*) and then used a weakened form of the bacteria to produce a vaccine to inoculate the chickens. He also produced a vaccine to prevent Anthrax, a disease primarily of cattle and sheep, but which can also affect humans.

Probably his most notable work was in producing a treatment for Rabies, a deadly viral disease. It was not possible to see the virus at that time, but inclusion bodies caused by the virus could be demonstrated in stained slices of brain tissue. A boy named Joseph Meister had been bitten by a rabid dog and was taken to Pasteur who, on 16 July 1885, commenced a course of injections, saving the boy's life (Fig. 21).

Pasteur had no medical qualifications, and if he attempted the same today, likely would be charged with reckless endangerment, child abuse, practicing medicine without a licence, and many other crimes.



Fig. 22. Robert Koch with microscope & enlarged TB bacilli Germany, 2005, Sc#2361



Fig. 23. Robert Koch with lab equipment & TB bacilli stained red China PR, 1982, Sc#1775



Fig. 24. Robert Koch with lungs & bacteria Afars-Issas, 1973-75, Sc#C87

Robert Koch (1843–1910) (Figs. 22, 23, 24), a German doctor, is justifiably called the “Father of Bacteriology.” He discovered the bacteria that cause Tuberculosis (*Mycobacterium tuberculosis*), Anthrax (*Bacillus anthracis*), and Cholera (*Vibrio cholerae*). He developed several vaccines, and a test for TB. He also produced a solid culture medium using agar (from seaweed) with various nutrients, and special culture containers (Petri dishes).

He placed bacteriology on a firm scientific foundation by his four postulates, which were:

1. *A micro-organism is proved to be the cause of a disease when the organism can be isolated in every case of the disease.*
2. *It can be cultivated in a pure culture.*
3. *Inoculation from such a culture must reproduce the disease in susceptible animals.*
4. *It must be re-obtained from such animals and again grown in pure culture.*

He was awarded the Nobel Prize for Medicine in 1905, as well as the Order Pour le Mérite (Civil).



Fig. 25. Sir Alexander Fleming with Clostridia microbes Mauritius, 1978, Sc#465



Fig. 26. Petri dish with bacteria colonies & mold Mauritius, 1978, Sc#466



Fig. 27. *Penicillium notatum* Mauritius, 1978, Sc#467

Many people had sought cures or treatments for diseases with varying success. Paul Ehrlich (1854–1915) sought a “magic bullet” to cure all diseases. Sir Alexander Fleming (1881–1955), a Scottish bacteriologist, who had served in the Royal Army Medical Corps during WW1, had witnessed the large number of deaths caused by certain organisms even in small wounds.

Two of these microbes belong to the same group, the Clostridia (Fig. 25). These are anaerobic, Gram-positive, spore forming bacilli. *Clostridium perfringens* (formerly *C. welchii*) causes gas gangrene, while *C. tetani* is responsible for tetanus.

In 1928, he noticed a bacterial culture in a Petri dish had been contaminated with a mold (Fig. 26). This was not unusual, but he also noted that no bacterial colonies grew close to the mold (*Penicillium notatum*) (Fig. 27). However, he did not have the resources to produce a suitable form for treating patients.

Howard W. Florey (1898–1968) and Ernst B. Chain (1906–1979) produced the active chemical “penicillin,” which was generally harmless to people, but deadly to many bacteria, especially the Gram-positive types.

Fleming, Florey, and Chain were jointly awarded the Nobel Prize in 1945. This discovery led to many other fungi being tested, resulting in Aureomicin, Terramicin, and other antibiotics. Unfortunately, due to overuse on trivial complaints, many bacteria have now built up resistance against several antibiotics.

As mentioned earlier, bacteria, protozoa, and minute fungi are colorless, and generally require staining with special chemicals in order to be examined through the microscope. Some stains are extracted from plants or insects, while others come from aniline dyes.

Most stained films are of dead organisms. However, some modern chemicals (supra-vital stains) will color living organisms. The basic method used to differentiate between two major groups of bacteria is the “Gram” stain. A dried bacterial smear on a slide is stained with crystal violet, rinsed, and then treated with an iodine solution. The smear is then decolorized with an acetone or ether mixture. The smear is air dried and counterstained with safranin, and rinsed with water.

Gram-positive bacteria are stained blue, while Gram-negative are stained red. The cause of the difference lies in the outer coats of the organisms.

Some other bacteria, such as the tubercle bacillus, have more complex coats and require a special stain, carbol fuchsin, which has to be added to the film, heated to boiling temperature, then cooled and decolorized with a concentrated mixture of alcohol and hydrochloric acid, then counterstained with methyl blue. The bacteria are red and other cells are blue.

Blood and protozoa are generally stained by a mixture of methyl blue and eosin, such as Field’s stain (Fig. 28). I believe this is the only microscopy stain shown in detail on a stamp.

Some specific diseases that are illustrated on stamps are described below.



Fig. 29. Anopheles mosquito
Angola, 1962, Sc#439



Fig. 31. Malarial protozoa in
red blood cells
Cuba, 1962, Sc#757



Fig. 32. Anopheles mosquito
in feeding position
Yuaoslavia, 1962, Sc#649



Fig. 30. Battista Grassi
Italy, 1955, Sc#701



Fig. 28. Field’s stain with
malarial protozoa
Malaysia, 1976, Sc#139

Malaria. The name is derived from *mala aria* (bad air) as the disease often occurred near smelly swamps or marshes. It now is known that the cause is a protozoan (*Plasmodium*) that is transmitted by the dappled wing Anopheles mosquito (Fig. 29). The organism goes through several stages, a sexual cycle in the mosquitoes gut, and asexual cycle in man and other animals. This was shown by Battista Grassi (1854–1925), an Italian scientist (Fig. 30) who also proved that only the female Anopheles mosquito could pass on the infection. The mosquito sucks blood from an infected person, and after some time injects another person with new cells mixed with haemolytic saliva (Figs. 31 & 32).

Sleeping Sickness. A protozoan (*Trypanosoma gambiense*) infection spread by the biting Tsetse Fly (*Glossina papalis*) (Fig. 33). It occurs in tropical and sub-tropical Africa.



Fig. 34. Trypanosomes & red blood cells
MicrobeWiki, Kenyon College

Chaga's Disease. Caused by a similar organism (*Trypanosoma cruzi*) (Fig. 34), which is transmitted by various Reduviidae such as the Assassin Bug (Fig. 35). The insect feeds and defecates at the same time. The bite causes itching and the person scratches the lump and introduces the organism into the bloodstream. It is found in Central and South America.



Fig. 35. Assassin Bug
US, 1999, Sc#3351g



Fig. 33. Tsetse Fly, protozoa, & red blood cells
Poland, 1978, Sc#2275



Fig. 36. Human Immunodeficiency Virus
France, 1994, Sc#2419

HIV/AIDS. There is considerable confusion about this combination. The human immunodeficiency virus (Fig. 36) may attack the “T” white blood cells, thus compromising the body’s defense mechanisms, allowing other infections to flourish.

The acquired immunodeficiency syndrome is the actual disease. Not all persons infected by HIV develop AIDS, but may spread the virus to other people who may then develop AIDS.



Fig. 37. HIV & Blood
Morocco, 2006, Sc#1030

The illustration of the virus shown (Fig. 37), which has pricked a finger and drawn blood, has an outer coat of spikes. But the actual virus is as shown in Fig. 38.

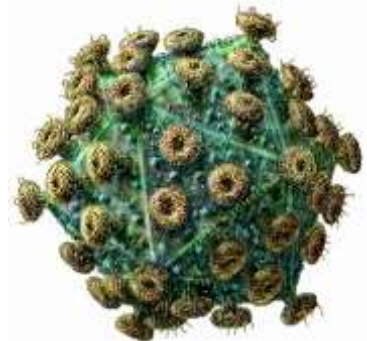


Fig. 38. HIV particle (viroon)
Russell Knightly Media

NEW STUDY UNIT

The **Gastronomy on Stamps Study Unit** is being organized to bring together those who love food and stamp collecting. This is also an area that relates to our own area of study. There are very few things we ingest that are not biological. The new unit currently has about 30 Charter Members working to bring the Study Unit to life. The first issue of their quarterly journal, *The Philatelic Gourmet*, will be published in January 2018.

See their website (<http://www.gastronomystamps.org/>) for membership information and applications. Dues for electronic delivery are \$5 per year. Dues for hardcopy to US addresses is \$20 per year, to Canada \$24 per year, and elsewhere \$28 per year. For more details, contact David Wolfersberger (dewolf2@swbell.net), or by mail at 5062 NW 35th Lane Rd, Ocala, FL 34482.

FLOWERS FROM THE GARDEN ISSUE

The US Postal Service issued four new Forever (49c) stamps on 16 August 2017, at the Mary Jo Wegner Arboretum and East Sioux Falls Historic Site in Sioux Falls, South Dakota.

The edition features four still-life paintings of flowers that come from typical American gardens. One stamp features red camellias and yellow forsythia in a yellow pitcher. On the second there are white peonies and pink tree peonies in a clear vase. An arrangement of white hydrangeas, white and pink roses, green hypericum berries, and purple lisianthus in a white vase graces the third stamp, while blue hydrangeas in a blue pot appear on the final one.

The stamps use existing art that had been created by American artist Elizabeth Brandon of Franklin, Tennessee. The designer for the issue was Derry Noyes. Brandon said, "What an honor and privilege it is for me to have my artwork of florals selected for a grouping of United States Forever Stamps."

These paintings were inspired by floral still-lives created by Dutch and Flemish artists of the 17th and 18th centuries. Each stamp features one of four of Brandon's paintings of flowers from the garden artfully arranged in a container.

The stamps were printed by Banknote Corporation of America and issued in double-sided booklet panes of 20 and also in coils of 3,000 and 10,000. The colors used were cyan, magenta, yellow, and black on phosphor tagged paper with pressure sensitive adhesive. A plate number appears on every 28th stamp of the coils.

These stamps are not soakable in water, so if you want to save a used copy for your album, the best way is to trim them closely and leave them on the paper.

I know several die-hard traditionalists who insist in using various chemical compounds to try to remove these types of stamps from the paper. I think this is unwise for a couple reasons. First of all, no one knows the long term effect that these compounds will have on the stamps. They may appear OK after they are removed, but this new adhesive has not been around long enough for the ultimate results of these methods to become evident.

Second, a neatly trimmed used copy looks perfectly fine in an album. Perhaps it would be even better to save the entire cover, which shows the postal history and confirms the proper usage of the items.



Flowers From The Garden
Digital Images and Paintings © Elizabeth Brandon

INTERNATIONAL BOTANICAL CONGRESSES 1900–2017

Dr. John Gray, BU1855

[*Ed. Note: This is the second installment of a three-part article on the history of the International Botanical Congresses. See Vol. 66 (3) for first part of this article. The article will continue in the next edition. Dr. Gray is a retired professor of plant molecular biology at the University of Cambridge, England, and has collected stamps of Great Britain since boyhood. He has written articles on Post & Go stamps and Smilers Sheets for magazines such as Gibbons Stamp Monthly. He started thematic collections on topics related to his work interests in 2006, and for the past ten years he has collected philatelic items related to Charles Darwin, plant genetics, photosynthesis, and the history of molecular biology. He has attended several International Botanical Congresses and has accumulated relevant philatelic items. He joined ATA in 2010, and the Biology Unit in 2013.*]

9th Through 12th Congresses

The 9th International Botanical Congress was held in Montreal, Canada, on 19–29 August 1959 and a mechanised slogan postmark reading “IX CONGRES INTERNATIONAL DE BOTANIQUE 19–29 AOUT” was applied to mail throughout the period 12–28 August 1959 (Fig. 8). An English version of the slogan, reading “IX INTERNATIONAL BOTANICAL CONGRESS 19-29 AUGUST,” was also used, but the period of its use is unclear.

The Congress Organizing Committee used printed envelopes with the Congress emblem, a green and white maple leaf with “1959” in green, located in the center of the name of the Congress in English and French. A cover used in 1957 as part of the organization of the Congress is shown in Fig. 9.



Fig. 8. Slogan postmark from the 9th International Botanical Congress, Montreal, in French.



Fig. 9. Cover from the organizers of the 9th International Botanical Congress, Montreal.

The 10th International Botanical Congress, held at the University of Edinburgh, Scotland, on 4–11 August 1964, was the first Congress to have special stamps issued. A set of four stamps depicting native British flowers, designed by Michael and Sylvia Goaman, was issued on 5 August 1964.

The stamps showed Spring Gentian (*Gentiana verna* L.) on the 3d stamp, Dog Rose (*Rosa canina* L.) on the 6d stamp, Honeysuckle (*Lonicera periclymenum* L.) on the 9d stamp, and Fringed Water Lily [*Nymphoides peltata* (S.G. Gmel.) Kuntze] on the 1s3d stamp (Fig. 10).



Fig. 10. Set of stamps for the 10th International Botanical Congress on the printers, Harrison & Sons, presentation card. Insert, official Congress handstamp from 31 July 1964.

A small proportion (about four percent) of each of these stamps was overprinted with three phosphor bars to aid mechanised sorting of the mail. A special handstamp with a stylized thistle head labeled "TENTH INTERNATIONAL BOTANICAL CONGRESS EDINBURGH" together with the date of posting was used from 31 July to 12 August 1964 (Fig. 10).

A large number of philatelic items, including presentation packs and first day covers, were produced for this stamp issue.



Special stamps were also produced for the 11th International Botanical Congress held in Seattle, Washington on 24 August–2 September 1969. Four 6c stamps, depicting plants from the four corners of the USA, were designed by Stanley Galli of Kentfield, California and issued on 23 August 1969.

The set-tenant stamps show Douglas Fir [*Pseudotsuga menziesii* (Mirb.) Franco] from the northwest, Ocotillo (*Fouquieria splendens* Engelm.) from the southwest, Showy Lady's Slipper (*Cypripedium reginae* Walter) from the northeast, and Franklin tree (*Franklinia alatamaha* W. Bartram ex Marshall) from the southeast (Fig. 11). *Franklinia alatamaha* is unfortunately now extinct in the wild, but it survives as a cultivated ornamental tree.



Fig. 11. Set of stamps for the 11th International Botanical Congress in Seattle.



Fig. 12. First day of issue postmarks for the 11th International Botanical Congress stamps.

Two distinct First Day of Issue postmarks, differing in size, font, and the position of the state abbreviation in the circular date stamp, were used on first day covers (Fig. 12). A large quantity of first day covers with different catchets were produced for the stamp issue.

Labels inscribed XITH INTERNATIONAL BOTANICAL CONGRESS were produced and used by Cadillac Post on mail predating the Congress in Seattle (Fig. 13).



Fig. 13. Cadillac Post stamps for the 11th International Botanical Congress.

The 12th International Botanical Congress was held in the Komarov Botanical Institute, Leningrad (now St Petersburg), USSR on 3–10 July 1975, and a special stamp, designed by Leo Sharov, was issued on 20 June 1975 (Fig. 13).

The 6k stamp has a central region showing the Congress symbol of a birch leaf with a globe and the Roman figure XII surrounded with “COLLOQUIA BOTANICORUM LENINGRAD 1975.”

The congress symbol is itself surrounded by five sectors showing different images of Russian flora, and the text “XII International Botanical Congress · Post · USSR” in Cyrillic.



Fig. 14. Stamp issued for the 12th International Botanical Congress, Leningrad.

The sectors contain images of a fossil plant (*Livistona palibinii* Takht.), the Bellflower (*Campanula mirabilis* Albov) described as probably the most beautiful of all *Campanula* species, a fungus [*Cordyceps militaris* (L. ex St Amans) Link], the Red Alga [*Delesseria sanguinea* (Huds.) Lamour.], and the Giant Bellflower (*Ostrowskia magnifica* Regel).

Congress members received a stamp and pre-stamped postcard and envelope, each with different stamp-like impressions (Fig. 15).



Fig. 15. Pre-stamped postcard and envelope produced for the 12th International Botanical Congress.

A special postmark showing the Congress symbol and dated 3–10.VIII.1975 was used throughout the Congress (Fig. 16).

[to be continued in next edition]



Fig. 16. Postmarks used on the 12th International Botanical Congress stamp. Left, first day of issue 20 June 1975. Right, Congress mail 3–10 August 1975.

AUGUSTE CHEVALIER COVER

Larry Crain, Oregon

Auguste Jean Baptiste Chevalier (1873–1956) was a French botanist and explorer in Africa, Asia (Indochina), and South America (French Guinea). He particularly added to the knowledge of trees, grasses, and agricultural plants of tropical and Saharan Africa. In the three continents, his exploring was in French colonies.

He obtained a degree in natural sciences in 1896 and a Ph.D. in 1901 from the University of Lille. In 1929, he was president of the Botanical Society of France and in 1953, president of the French Academy of Sciences.

The botanical genera *Chevalierella*, *Chevalierodendron*, *Neochevaliera*, and *Neochevalierodendron* are named in his honor. In 1934, *Echium vulcanorum*, a plant found only on Fogo Island, Cape Verde was discovered and named by Chevalier. Its local name translates “tongue of cow.”

The cover shown tried to catch up with Chevalier in Africa. It was mailed to him in Senegal on 26 August 1912, from Majunha, Madagascar, but was held until the 31st for transport. Because he was not in Senegal, the cover was forwarded (3? October) to Paris where it arrived on 14 October and was sent on to Brazzaville, Congo, arriving on 10 November. He was also not there, and it was sent again to Paris.



Auguste Chevalier





BOTANY

Editor

Christopher E. Dahle, BU1269

New Listings



| Scott# | Denom | Common Name/Scientific Name | Family/Subfamily | Code |
|--------------------------------------------------------------------------------------|-------|-----------------------------------------------------------------|------------------|---------|
| ANDORRA (Spanish Admin) 2017 June 5 (Birch Tree) (Single) | | | | |
| 437 | €1.35 | Birch tree & leaf, <i>Betula pendula</i> | Betulaceae | T V A |
| ARGENTINA 2016 (Stylized Fruit) (Set/9) | | | | |
| 2786 | 1p | Peach, <i>Prunus persica</i> | Rosaceae | Fr A S |
| 2787 | 2p | Apple, <i>Malus domestica</i> | Rosaceae | Fr A S |
| 2788 | 5p | Lemon, <i>Citrus limon</i> | Rutaceae | Fr A S |
| 2789 | 9p | Japanese Plum, <i>Prunus salicina</i> | Rosaceae | Fr A S |
| 2790 | 10p | Cherry, <i>Prunus avium</i> | Rosaceae | Fr A S |
| 2791 | 30p | Grape, <i>Vitis vinifera</i> | Vitaceae | Fr A S |
| 2792 | 40p | Pear, <i>Pyrus communis</i> | Rosaceae | Fr A S |
| 2793 | 50p | Orange, <i>Citrus sinensis</i> | Rutaceae | Fr A S |
| 2794 | 100p | Watermelon, <i>Citrullus lanatus</i> | Cucurbitaceae | Fr A S |
| 2016 (Stylized Vegetables) (Set/10) | | | | |
| 2795 | 1p | Carrot, <i>Daucus carota</i> | Apiaceae | V A S |
| 2796 | 2p | Artichoke, <i>Cynarus cardunculus</i> | Asteraceae | Fl A S |
| 2797 | 3p | Corn, <i>Zea mays</i> | Poaceae | Fr A S |
| 2798 | 4p | Tomato, <i>Lycopersicum esculentum</i> | Solanaceae | Fr A S |
| 2799 | 5p | Asparagus, <i>Asparagus officinalis</i> | Asparagaceae | V A S |
| 2800 | 8p | Eggplant, <i>Solanum melongena</i> | Solanaceae | Fr A S |
| 2801 | 10p | Potato, <i>Solanum tuberosum</i> | Solanaceae | V A S |
| 2802 | 30p | Pepper, <i>Capsicum annum</i> | Solanaceae | Fr A S |
| 2803 | 50p | Squash, <i>Cucurbita maxima</i> | Cucurbitaceae | Fr A S |
| 2804 | 100p | Onion, <i>Allium cepa</i> | Amaryllidaceae | V A S |
| 2016 August 16 (Intl Year of Pulses) (MS/4) | | | | |
| 2805a | 10p | Peas, <i>Pisum sativum</i> | Fabaceae | Fr A MS |
| 2805b | 10p | Chickpea, <i>Cicer arietinum</i> | Fabaceae | Fr A MS |
| 2805c | 10p | Lentil, <i>Lens culinaris</i> | Fabaceae | Fr A MS |
| 2805d | 10p | Bean, <i>Phaseolus vulgaris</i> | Fabaceae | Fr A MS |
| ARMENIA 2016 December 29 (Flowers) (Set/2) | | | | |
| 1094 | 230d | Woodland Tulip, <i>Tulipa sylvestris</i> | Liliaceae | Fl A |
| 1095 | 330d | Three-toothed Orchid, <i>Neotinea (=Orchis) tridentata</i> | Orchidaceae | Fl A |
| AUSTRALIA 2017 February 7 (Special Occasions: Love) (Set/2 & 2ea Bklt/10) | | | | |
| 4582 | \$1 | Rose, <i>Rosa × hybrida</i> (perf 14½×14) | Rosaceae | Fl A |
| 4584 | \$1 | Rose, <i>Rosa × hybrida</i> (die cut 11¼) | Rosaceae | Fl A |
| 4584a | | Bklt/10 (Sc#4584) | | |
| 2017 April 18 (World War I Cent.) (Set/5 & Bklt/10) | | | | |
| 4608–12 | \$1 | Poppy, <i>Papaver rhoeas</i> (w/ various designs) (perf 14¼) | Papaveraceae | Fl C |
| 4613–17 | \$1 | Poppy, <i>Papaver rhoeas</i> (w/ various designs) (die cut 11¼) | Papaveraceae | Fl C |
| 4617a | | Bklt/10 (2ea Sc#4613–17) | | |

| | | | |
|-----------------------------------------------|---------|-------------------------------------------------------------------------------------|----------------------|
| AUSTRALIA (continued) | | 2017 June 20 (Succulent Plants) (Set/4 & Strip/4) | |
| 4645 | \$1 | <i>Portulaca cyclophylla</i> (perf 14×14 ³ / ₄) | Portulacaceae FI V A |
| 4646 | \$1 | <i>Tecticornia verrucosa</i> (perf 14×14 ³ / ₄) | Amaranthaceae FI V A |
| 4647 | \$1 | <i>Calandrinia creethae</i> (perf 14×14 ³ / ₄) | Portulacaceae FI V A |
| 4648 | \$1 | <i>Gunniopsis quadrifida</i> (perf 14×14 ³ / ₄) | Aizoaceae FI V A |
| 4649 | \$1 | <i>Portulaca cyclophylla</i> | Portulacaceae FI V A |
| 4650 | \$1 | <i>Tecticornia verrucosa</i> | Amaranthaceae FI V A |
| 4651 | \$1 | <i>Calandrinia creethae</i> | Portulacaceae FI V A |
| 4652 | \$1 | <i>Gunniopsis quadrifida</i> | Aizoaceae FI V A |
| 4652a | | Horiz coil strip/4 (Sc#4649–52) (die cut 11 ¹ / ₄) | |
| 4652b | | Bklt/10 (3ea Sc#4649–50 & 2ea Sc#4651–52) (die cut 11 ¹ / ₄) | |
| AUSTRIA | | 2017 July 28 (Oak Tree) (Single) | |
| 2688 | 690c | Oak Tree, <i>Quercus robur</i> (silkscreened on oak veneer) | Fagaceae T A |
| AZERBAIJAN | | 2017 April 14 (Novruz Festival) (Block/4) | |
| 1125d | 30g | Tulips, <i>Tulipa × hybrida</i> | Liliaceae FI A |
| | | 2017 April 14 (25th anniv. Khojaly Massacre) | |
| 1126 | 10g | Stylized flower | FI B S |
| BELARUS | | 2017 May 3 (Flowers of Central Botanical Garden) (Set/2 & SS/4) | |
| 1045 | (1.02r) | Holiday Sun Narcissus, <i>Narcissus</i> ‘Holiday Sun’ | Amaryllidaceae FI A |
| 1046 | (1.38r) | Armani Tulip, <i>Tulipa</i> ‘Armani’ | Liliaceae FI A |
| 1046a | | SS/4 (2ea Sc#1045–46) | |
| BELGIUM | | 2017 March 6 (Bluebells in Blue Forest, Halle) (MS/5) | |
| 2821a | (€1.48) | Bluebell, <i>Hyacinthoides non-scripta</i> (flower & buds) | Asparagaceae FI A MS |
| 2821b | (€1.48) | Same species (close-up of flower) | FI A MS |
| 2821c | (€1.48) | Same species (buds) | FI A MS |
| 2821d | (€1.48) | Same species (flowers) | FI A MS |
| 2821e | (€1.48) | Same species (flowers on forest floor) (also in Bot margin) | FI A MS |
| BHUTAN | | 2016 October 18 (National Flora & Fauna) (MS/4 & 4ea SS/1) | |
| 1556b | 30nu | Blue Poppies <i>Meconopsis grandis</i> | Papaveraceae FI A MS |
| 1556d | 30nu | Cypress Tree, <i>Cupressus torulosa</i> (with Takin) | Cupressaceae T B MS |
| 1558 | SS 60nu | Blue Poppies, <i>Meconopsis grandis</i> | Papaveraceae FI A SS |
| 1560 | SS 60nu | Cypress Tree, <i>Cupressus torulosa</i> (with Takin) | Cupressaceae T B SS |
| BOSNIA & HERZEGOVINA (Croat Admin) | | 2016 November 1 (Water Lilies) (Pair) | |
| 341a | 2.70m | White Water Lily, <i>Nymphaea alba</i> | Nymphaeaceae FI A |
| 341b | 2.70m | Yellow Water Lily, <i>Nuphar lutea</i> | Nymphaeaceae FI A |
| CHINA (Taiwan) | | 2017 April 26 (Ptgs by Giuseppe Castiglione) (Set/8) | |
| 4345 | \$5 | Poppies, <i>Papaver orientale</i> | Papaveraceae FI A |
| 4346 | \$5 | White and Purple Lilacs, <i>Syringa vulgare</i> | Oleaceae FI A |
| 4347 | \$7 | Tiger Lilies, <i>Lilium auratum</i> | Liliaceae FI B |
| | | Winding Peonies, <i>Paeonia</i> sp. | Paeoniaceae FI B |
| 4348 | \$9 | Emerald bamboo, <i>Bambusa mutabilis</i> | Poaceae FI B |
| | | Morning Glories, <i>Ipomoea purpurea</i> | Convolvulaceae FI B |
| 4349 | \$10 | Lotuses, <i>Nelumbo nucifera</i> | Nelumbonaceae FI V B |
| | | Arrowhead, <i>Sagittaria latifolia</i> | Alismataceae FI V B |
| 4350 | \$10 | Pea Blossoms, <i>Pisum sativum</i> | Fabaceae FI B |
| | | Millet Stalks, <i>Setaria italica</i> | Poaceae FI B |
| 4351 | \$12 | Cockscomb, <i>Celosia cristata</i> | Amaranthaceae FI A |
| 4352 | \$12 | Chrysanthemums, <i>Chrysanthemum</i> sp. | Asteraceae FI A |

| | | | | |
|-----------------|----------|-----------------------------------------------------------------------|-------------------|---------|
| CROATIA | | 2017 July 10 (Olive Grove in Lun) (Single) | | |
| 1043 | 5.80k | Olive Tree, <i>Olea europaea</i> | Oleaceae | T A |
| CURAÇAO | | 2016 November 17 (Christmas) (Set/6) | | |
| 296 | 440c | Holly, <i>Ilex aquifolium</i> | Aquifoliaceae | V A |
| CYPRUS | | 2017 February 16 (Flowers) (Set/4) | | |
| 1274 | 34c | <i>Crocus hartmannianus</i> | Iridaceae | Fl A |
| 1275 | 41c | Dwarf Carline Thistle, <i>Carlina pygmaea</i> | Asteraceae | Fl A |
| 1276 | 64c | Akamas Centaury, <i>Centaurea akamantis</i> | Asteraceae | Fl A |
| 1277 | € 1 | Cyprus Tulip, <i>Tulipa cypria</i> | Liliaceae | Fl A |
| DJIBOUTI | | 2016 November 25 (Orchids) (MS/4 & SS/1) | | |
| 1079a | 280fr | Crimson Cattleya, <i>Cattleya labiata</i> | Orchidaceae | Fl A MS |
| 1079b | 280fr | Kentucky Lady's Slipper, <i>Cypripedium kentuckiense</i> | Orchidaceae | Fl A MS |
| 1079c | 280fr | <i>Vanda denisoniana</i> | Orchidaceae | Fl A MS |
| 1079d | 280fr | Lady Orchid, <i>Orchis purpurea</i> | Orchidaceae | Fl A MS |
| 1098 | SS 960fr | Blue Orchid, <i>Vanda coerulea</i> | Orchidaceae | Fl A SS |
| | Margin | R: Large Lady's Slipper, <i>Cypripedium montanum</i> | Orchidaceae | Fl Z SS |
| FIJI | | 2016 August 12 (Flowers) (Set/5) | | |
| 1361 | 47c | Pink Hibiscus, <i>Hibiscus rosa-sinensis</i> | Malvaceae | Fl A |
| 1362 | 58c | Okra, <i>Abelmoschus esculentus</i> | Malvaceae | Fl A |
| 1363 | 85c | Red Hibiscus, <i>Hibiscus rosa-sinensis</i> | Malvaceae | Fl A |
| 1364 | \$1.04 | Indian Tulip Tree, <i>Thespesia populnea</i> | Malvaceae | Fl A |
| 1365 | \$15 | Sea Hibiscus, <i>Hibiscus tiliaceus</i> | Malvaceae | Fl A |
| GEORGIA | | 2016 December 15 (Flower) (Single) | | |
| 525 | 35t | Bladdernut, <i>Staphylea colchica</i> | Staphyleaceae | Fl A |
| GERMANY | | 2017 May 11 (Lily) (Set/2 & Bklt/10) | | |
| 2976 | 70c | Lily, <i>Lilium</i> sp. (perf 13½×13¾) | Liliaceae | Fl A |
| 2977 | 70c | Lily, <i>Lilium</i> sp. (die cut 9¾) | Liliaceae | Fl A |
| 2977a | | Bklt/10 (Sc#2977) | | |
| | | 2017 August 10 (Flower Type of 2005) (Single) | | |
| 2986 | 345c | Forget-me-not, <i>Myosotis sylvatica</i> | Boraginaceae | Fl A |
| | | 2017 August 10 (400th anniv. Fruitbearing Society) (Single) | | |
| 2988 | 145c | Date palm (?), <i>Phoenix dactylifera</i> | Arecaceae | T B |
| GREECE | | 2017 June 27 (Mastic Trees) (SS/1 & Bklt/2) | | |
| 2793 | €2.82 | <i>Pistacia lentiscus</i> | Anacardiaceae | T A |
| 2793a | | SS/1 (Sc#2793) (perf 13¾) | | |
| 2793b | | <i>Pistacia lentiscus</i> (perf 13¾ horiz) | Anacardiaceae | T A |
| 2793c | | Bklt/2 (Sc#2793b) | | |
| | | 2017 September 8 (Cultural Exch. Year: Greece & China) (Set/3) | | |
| 2802 | 90c | Bamboo and olive branch, <i>Olea europaea</i> | Poaceae; Oleaceae | V A |
| ISRAEL | | 2017 April 4 (50th anniv. Settlements) (Set/3 + tabs) | | |
| 2143 | 2.40s | Apple, <i>Malus domestica</i> (Sa'ar River Waterfall) | Rosaceae | Fr B |
| 2144 | 2.40s | Dates, <i>Phoenix dactylifera</i> (Jordan Valley date grove) | Arecaceae | Fr B |
| 2145 | 2.40s | Olive branch, <i>Olea europaea</i> (Sebastia train station) | Oleaceae | V |
| | | 2017 September 4 (20th anniv. Diplomatic Relations w/ Croatia) | | |
| 2150 | 6.50s | Anemone, <i>Anemone coronaria</i> | Ranunculaceae | Fl B |
| | | Iris, <i>Iris croatica</i> | Iridaceae | Fl B |

| | | | | |
|----------------------------|--------|------------------------------------------------------------------------------|-------------|---------|
| ISRAEL (continued) | | 2017 September 12 (Aromatic Plants Type of 2017) (Bklt/6) [Vol.66(2)] | | |
| 2151 | 4.10s | Frankincense, <i>Boswellia sacra</i> | Burseraceae | Fl A |
| 2152 | 4.10s | Myrrh, <i>Commiphora myrrha</i> | Burseraceae | V A |
| 2153 | 4.10s | Balsam, <i>Commiphora gileadensis</i> | Burseraceae | Fr A |
| 2153a | | Bklt/6 (2ea Sc#2151–53) (die cut 12½×12¼) | | |
| ITALY | | 2016, April 11 (Regional Wine Grapes & Vineyards) (Sheet/13) | | |
| 3373a–m | 95c | <i>Vitis vinifera</i> (die cut 11) | Vitaceae | Fr A |
| LATVIA | | 2017 February 17 (Rose) (Single) | | |
| 959 | € 1.42 | Dog Rose, <i>Rosa canina</i> | Rosaceae | Fl A |
| | | 2017 March 3 (Freesia) (Single) | | |
| 960 | 64c | Freesia, <i>Freesia</i> sp. | Iridaceae | Fl A |
| LIECHTENSTEIN | | 2017 September 4 (Stone Fruit Varieties) (MS/8) | | |
| 1729a | 100rp | Mombacher Frühaprikose Apricots, <i>Prunus armeniaca</i> | Rosaceae | Fr A MS |
| 1729b | 100rp | Kirkespflaume Plums, <i>Prunus domestica</i> | Rosaceae | Fr A MS |
| 1729c | 100rp | Grüne Reinclaude Plums, <i>Prunus domestica</i> | Rosaceae | Fr A MS |
| 1729d | 100rp | Hauszwetschge Plums, <i>Prunus domestica</i> | Rosaceae | Fr A MS |
| 1729e | 100rp | Ungarische Beste Apricots, <i>Prunus armeniaca</i> | Rosaceae | Fr A MS |
| 1729f | 100rp | Schauenburger Cherries, <i>Prunus avium</i> | Rosaceae | Fr A MS |
| 1729g | 100rp | Mirabelle von Nancy Plums, <i>Prunus domestica</i> | Rosaceae | Fr A MS |
| 1729h | 100rp | Gelbe Denise Cherries, <i>Prunus avium</i> | Rosaceae | Fr A MS |
| MALAYSIA | | 2017 January 14 (Chinese Food) (Set/3 & SS/1) | | |
| 1652 | 85c | Mandarin Oranges, <i>Citrus reticulata</i> | Rutaceae | Fr B |
| | | 2017 February 21 (Orchids) (Set/6 & SS/6) | | |
| 1660 | 60c | Foxtail Orchid, <i>Rhynchosyilis retusa</i> | Orchidaceae | Fl A |
| 1661 | 70c | Violet Phalaenopsis, <i>Phalaenopsis violacea</i> | Orchidaceae | Fl A |
| 1662 | 80c | Reddish Vanda, <i>Vanda helvola</i> | Orchidaceae | Fl A |
| 1663 | 90c | Low's Paphiopedilum, <i>Paphiopedilum lowii</i> | Orchidaceae | Fl A |
| 1664 | \$1 | <i>Arachnis flos-aeris</i> | Orchidaceae | Fl A |
| 1665 | \$1.10 | Hooker's Papilionanthe, <i>Papilionanthe hookeriana</i> | Orchidaceae | Fl A |
| 1666a | 60c | Foxtail Orchid, <i>Rhynchosyilis retusa</i> | Orchidaceae | Fl A SS |
| 1666b | 70c | Violet Phalaenopsis, <i>Phalaenopsis violacea</i> | Orchidaceae | Fl A SS |
| 1666c | 80c | Reddish Vanda, <i>Vanda helvola</i> | Orchidaceae | Fl A SS |
| 1666d | 90c | Low's Paphiopedilum, <i>Paphiopedilum lowii</i> | Orchidaceae | Fl A SS |
| 1666e | \$1 | <i>Arachnis flos-aeris</i> | Orchidaceae | Fl A SS |
| 1666f | \$1.10 | Hooker's Papilionanthe, <i>Papilionanthe hookeriana</i> | Orchidaceae | Fl A SS |
| 1666 | | SS/6 (Sc#1666a–f) (imperf) | | |
| MALAYSIA (Kedah) | | 1986? (Agriculture & Arms Type of 1986) | | |
| 135c | 20c | Oil Palm, <i>Elaeis guineensis</i> | Arecaceae | T A |
| 135d | 30c | Rice, <i>Oryza sativa</i> | Poaceae | Fr A |
| | | 2003? (Agriculture & Arms Type Redrawn) | | |
| 136E | 30sen | Rice, <i>Oryza sativa</i> | Poaceae | Fr A |
| MALAYSIA (Kelantan) | | 1986? (Agriculture & Arms Type of 1986) | | |
| 117a | 5c | Cacao, <i>Theobroma cacao</i> | Malvaceae | Fr A |
| MALAYSIA (Malacca) | | 1986? (Agriculture & Arms Type of 1986) | | |
| 94c | 30c | Rice, <i>Oryza sativa</i> | Poaceae | Fr A |

| | | | | |
|---------------------------------------|-------|--------------------------------------------------------------------------|----------------|------|
| MALAYSIA (Negri Sembilan) | | 1986? (Agriculture & Arms Type of 1986) | | |
| 101b | 5c | Cacao, <i>Theobroma cacao</i> | Malvaceae | Fr A |
| 104c | 20c | Oil Palm, <i>Elaeis guineensis</i> | Arecaceae | Fr A |
| MALAYSIA (Pahang) | | 2002? (Agriculture & Arms Type Redrawn) | | |
| 118C | 30sen | Rice, <i>Oryza sativa</i> | Poaceae | Fr A |
| MALAYSIA (Penang) | | 2003? (Agriculture & Arms Type Redrawn) | | |
| 94D | 30sen | Rice, <i>Oryza sativa</i> | Poaceae | Fr A |
| MALAYSIA (Perak) | | 1986? (Agriculture & Arms Type) | | |
| 166d | 30c | Rice, <i>Oryza sativa</i> | Poaceae | Fr A |
| MALAYSIA (Selangor) | | 1986? (Agriculture & Arms Type) | | |
| 145c | 10c | Pepper, <i>Piper nigrum</i> | Piperaceae | Fr A |
| 147c | 20c | Oil Palm, <i>Elaeis guineensis</i> | Arecaceae | Fr A |
| | | 2003? (Agriculture & Arms Type Redrawn) | | |
| 148D | 30sen | Rice, <i>Oryza sativa</i> | Poaceae | Fr A |
| MALAYSIA (Trengganu) | | 1986? (Agriculture & Arms Type) | | |
| 112a | 5c | Cacao, <i>Theobroma cacao</i> | Malvaceae | Fr A |
| 113a | 10c | Pepper, <i>Piper nigrum</i> | Piperaceae | Fr A |
| MALAYSIA (Wilayah Persekutuan) | | 2002? (Agriculture & Arms Type Redrawn) | | |
| 11b | 10sen | Pepper, <i>Piper nigrum</i> | Piperaceae | Fr A |
| 13b | 20sen | Oil Palm, <i>Elaeis guineensis</i> | Arecaceae | Fr A |
| 14b | 30sen | Rice, <i>Oryza sativa</i> | Poaceae | f |
| MALTA | | 2017 July 10 (EuroMed Postal: Trees in the Mediterranean) (Set/2) | | |
| 1599 | 10c | Sandarac Trees, <i>Tetraclinis articulata</i> (w/ church) | Cupressaceae | T A |
| 1600 | €3.63 | Sandarac Trees, <i>Tetraclinis articulata</i> (w/ church) | Cupressaceae | T A |
| MARSHALL ISLANDS | | 2017 March 3 (Flowers) (Sheet/10) | | |
| 1152a | 49c | Plumeria, <i>Plumeria alba</i> | Apocynaceae | Fl A |
| 1152b | 49c | Hibiscus, <i>Hibiscus rosa-sinensis</i> | Malvaceae | Fl A |
| 1152c | 49c | Primrose Willow, <i>Ludwigia sp.</i> | Onagraceae | Fl A |
| 1152d | 49c | Sour Sop, <i>Annona muricata</i> | Annonaceae | Fl A |
| 1152e | 49c | Globe Amaranth, <i>Gomphrena globosa</i> | Amaranthaceae | Fl A |
| 1152f | 49c | Arrowleaf Elephant's Ear, <i>Xanthosoma sagittifolium</i> | Araceae | Fl A |
| 1152g | 49c | Field Pumpkin, <i>Cucurbita pepo</i> | Cucurbitaceae | Fl A |
| 1152h | 49c | Asiatic Pennywort, <i>Centella asiatica</i> | Apiaceae | Fl A |
| 1152i | 49c | Fire-on-the-mountain, <i>Euphorbia cyathophora</i> | Euphorbiaceae | Fl A |
| 1152j | 49c | Polynesian Arrowroot, <i>Tacca leontopetaloides</i> | Dioscoreaceae | Fl A |
| NORFOLK ISLAND | | 2017 July 18 (Flowers) (Set/2 & SS/2) | | |
| 1135 | \$1 | <i>Hibiscus insularis</i> | Malvaceae | Fl A |
| 1136 | \$2 | <i>Lagunaria patersonia</i> | Malvaceae | Fl A |
| 1136a | | SS/2 (Sc#1135–36) | | |
| PERU | | 2017 January 6 (Flora) (Set/4) (dated 2016) | | |
| 1899 | 4s | Mangrove, <i>Rhizophora mangle</i> | Rhizophoraceae | T A |
| 1900 | 4s | Yareta, <i>Azorella compacta</i> | Apiaceae | V A |
| 1901 | 4s | Quina or Red Cinchona, <i>Cinchona pubescens</i> | Rubiaceae | Fl A |
| 1902 | 4s | Puya or Queen-of-the-Andes, <i>Puya raimondii</i> | Bromeliaceae | V A |
| | | 2017 January 26 (Pisco Sour Drink Cent.) (Set/2) | | |
| 1914b | 9s | Grapes, <i>Vitis vinifera</i> (w/ Pisco Sour glass) | Vitaceae | Fr B |

RUSSIA**2017 March 29** (Russian Flora) (Block/4)

| | | | | |
|-------|-----|---------------------------------------------|----------------|------|
| 7814a | 29r | <i>Galanthus woronowii</i> | Amaryllidaceae | Fl A |
| 7814b | 29r | <i>Erythronium caucasicum</i> | Liliaceae | Fl A |
| 7814c | 29r | <i>Diospyros lotus</i> | Ebenaceae | Fl A |
| 7814d | 29r | <i>Cyclamen coum</i> ssp. <i>caucasicum</i> | Primulaceae | Fl A |

SIERRA LEONE**2015 August 21** (Orchids) (MS/4 & SS/1)

| | | | | |
|-------|------------|-------------------------------------------------------|-------------|---------|
| 3401a | 5500le | Low's Paphiopedilum, <i>Paphiopedilum lowii</i> | Orchidaceae | Fl A MS |
| 3401b | 5500le | <i>Laelia anceps</i> | Orchidaceae | Fl A MS |
| 3401c | 5500le | <i>Paphiopedilum</i> hybrid | Orchidaceae | Fl A MS |
| 3401d | 5500le | Stuart's Phalaenopsis, <i>Phalaenopsis stuartiana</i> | Orchidaceae | Fl A MS |
| 3421 | SS 22000le | <i>Cattleya</i> hybrid | Orchidaceae | Fl A SS |
| | Margin | R: <i>Laelia anceps</i> | Orchidaceae | Fl Z SS |

2015 September 25 (Ptgs by Emile Bernard) (MS/4 & SS/1)

| | | | | |
|-------|--------|-----------------------------------------|--|------|
| 3424d | 6000le | U/I flowers ("Still Life with Flowers") | | Fl U |
|-------|--------|-----------------------------------------|--|------|

2015 September 25 (Ptgs by Paul Gauguin) (MS/4 & SS/1)

| | | | | |
|-------|--------|---------------------------------------------------------------------|----------|------|
| 3428c | 6000le | Apples, <i>Malus domestica</i> ("Still Life with Teapot and Fruit") | Rosaceae | Fr B |
| | | Oranges, <i>Citrus sinensis</i> | Rutaceae | Fr B |

2015 September 25 (Ptgs by Henri Matisse) (MS/4 & SS/1)

| | | | | |
|-------|--------|--------------------------------|--|--------|
| 3432d | 6000le | U/I fruit ("Dishes and Fruit") | | Fr U C |
|-------|--------|--------------------------------|--|--------|

2015 September 25 (Ptgs by Paul Sérusier) (MS/4 & SS/1)

| | | | | |
|-------|--------|-----------------------------------------------------------------------|-----------|------|
| 3438a | 6000le | Apples, <i>Malus domestica</i> ("Still Life with Apples and Violets") | Rosaceae | Fr B |
| | | Violets, <i>Viola</i> sp. | Violaceae | Fl B |

2015 September 25 (Ptg by J. Alden Weir) (MS/4 & SS/1)

| | | | | |
|-------|--------|----------------------------------------------------------------------|----------|------|
| 3442a | 6000le | Rose, <i>Rosa</i> sp. ("Roses in a Silver Bowl on a Mahogany Table") | Rosaceae | Fl A |
|-------|--------|----------------------------------------------------------------------|----------|------|

2016 February 26 (Ptgs by Claude Monet) (MS/4 & SS/1)

| | | | | |
|-------|--------|-------------------------------------------------------------------------|-----------|------|
| 3638c | 6000le | Tulips, <i>Tulipa</i> × <i>hybrida</i> ("A Field of Tulips in Holland") | Liliaceae | Fl C |
|-------|--------|-------------------------------------------------------------------------|-----------|------|

2016 June 30 (Post-Impressionist Ptgs) (MS/4 & SS/1)

| | | | | |
|-------|--------|-------------------------------------------------|--|------|
| 3811a | 6000le | U/I flowers ("Bouquet of Flowers," by Rousseau) | | Fl U |
|-------|--------|-------------------------------------------------|--|------|

2016 June 30 (Ptgs by Van Gogh) (MS/4 & SS/1)

| | | | | |
|-------|------------|----------------------------------------------------------------------|--------------|------|
| 3820a | 6000le | Sunflowers, <i>Helianthus annuus</i> ("Sunflowers") (also LR margin) | Asteraceae | Fl A |
| 3820c | 6000le | Grapes, <i>Vitis vinifera</i> ("Red Vineyards Near Arles") | Vitaceae | V C |
| 3840 | SS 24000le | Stylized Cypress ("Road with Cypresses") | Cupressaceae | T S |

2016 June 30 (Ptg by Qi Bashi) (MS/4 & SS/1)

| | | | | |
|-------|--------|-----------------------------------------------------------|----------|------|
| 3822a | 6000le | Plum, <i>Prunus mume</i> ("Butterfly and Flowering Plum") | Rosaceae | Fl B |
|-------|--------|-----------------------------------------------------------|----------|------|

2016 July 29 (Ptg by Paul Cezanne) (MS/4 & SS/1)

| | | | | |
|-------|--------|-------------------------------------------------------------|----------|------|
| 3853a | 6000le | Apples, <i>Malus domestica</i> ("Compote Glass and Apples") | Rosaceae | Fr A |
| 3853c | 6000le | U/I Flowers ("Still Life Flowers in a Vase") | | Fl U |

2016 August 29 (Orchids) (MS/4 & SS/1)

| | | | | |
|-------|------------|-------------------------------------------------------------------------|-------------|---------|
| 3901a | 6000le | Fire-star Orchid, <i>Epidendrum radicans</i> | Orchidaceae | Fl A MS |
| 3901b | 6000le | Three-toothed Orchid, <i>Neotinea tridentata</i> | Orchidaceae | Fl A MS |
| 3901c | 6000le | Spotted Zygopetalum, <i>Zygopetalum maculatum</i> | Orchidaceae | Fl A MS |
| 3901d | 6000le | Butterfly Orchid, <i>Psychopsis</i> (= <i>Oncidium</i>) <i>papilio</i> | Orchidaceae | Fl A MS |
| 3921 | SS 24000le | Christy's Dendrobium, <i>Dendrobium christyanum</i> | Orchidaceae | Fl A SS |
| | Margin | UL: Three-toothed Orchid, <i>Neotinea tridentata</i> | Orchidaceae | Fl Z SS |
| | | UR: Spotted Zygopetalum, <i>Zygopetalum maculatum</i> | Orchidaceae | Fl Z SS |
| | | Bot: <i>Epidendrum cinnabarinum</i> | Orchidaceae | Fl Z SS |

| | | | |
|---------------------------------|------------|-------------------------------------------------------------------------------|--------------------------|
| SIERRA LEONE (continued) | | 2016 October 28 (Intl Year of Pulses) (MS/4 & SS/1) | |
| 3979a | 6000le | Kidney Beans, <i>Phaseolus vulgaris</i> | Fabaceae Fr A MS |
| 3979b | 6000le | Green Peas, <i>Pisum sativum</i> | Fabaceae Fr A MS |
| 3979c | 6000le | Red Lentils, <i>Lens culinaris</i> | Fabaceae Fr A MS |
| 3979d | 6000le | Chickpeas, <i>Cicer arietinum</i> | Fabaceae Fr A MS |
| 3997 | SS 24000le | Fava Beans, <i>Vicia faba</i> (also in margin) | Fabaceae Fr V Z SS |
| | | 2016 December 29 (Cacti) (MS/4 & SS/1) | |
| 4065a | 6000le | Peyote, <i>Lophophora williamsii</i> | Cactaceae Fl V A MS |
| 4065b | 6000le | Bilberry Cactus, <i>Myrtillocactus geometrizans</i> | Cactaceae V A MS |
| 4065c | 6000le | Mexican Lime Cactus, <i>Ferocactus pilosus</i> | Cactaceae V A MS |
| 4065d | 6000le | <i>Echinopsis silvestrii</i> | Cactaceae Fl V A MS |
| 4084 | SS 24000le | Cane Cholla, <i>Cylindropuntia imbricata</i> | Cactaceae V A SS |
| | Margin | L: Cane Cholla, <i>Cylindropuntia imbricata</i> | Cactaceae V Z SS |
| | | Ctr: San Pedro Cactus, <i>Echinopsis pachanoi</i> | Cactaceae V Z SS |
| | | LL: Barbary Fig, <i>Opuntia ficus-indica</i> | Cactaceae Fr V Z SS |
| | | R: Saguaro, <i>Carnegiea gigantea</i> | Cactaceae V Z SS |
| | | 2016 December 29 (Orchids) (MS/4 & SS/1) | |
| 4066a | 6000le | Pink phalaenopsis, <i>Phalaenopsis</i> sp. | Orchidaceae Fl U MS |
| 4066b | 6000le | White phalaenopsis, <i>Phalaenopsis</i> sp. | Orchidaceae Fl U MS |
| 4066c | 6000le | Blue phalaenopsis, <i>Phalaenopsis</i> sp. | Orchidaceae Fl U MS |
| 4066d | 6000le | <i>Phalaenopsis amabilis</i> | Orchidaceae Fl A MS |
| 4085 | SS 24000le | Pink phalaenopsis, <i>Phalaenopsis</i> sp. (also in Bot margin) | Orchidaceae Fl U Z SS |
| SLOVENIA | | 2017 July 10 (Flower) (Single) | |
| 1227 | €1.26 | <i>Arbutus unedo</i> | Ericaceae Fl Fr A |
| SOLOMON ISLANDS | | 2017 August 21 (Bees & Orchids) (MS/4 & SS/1) | |
| 2322a | \$10 | <i>Cymbidium</i> Clarisse Austin "Best Pink" | Orchidaceae Fl B MS |
| 2322b | \$10 | Coconut Orchid, <i>Maxillariella</i> (= <i>Maxillaria</i>) <i>tenuifolia</i> | Orchidaceae Fl B MS |
| 2322c | \$10 | <i>Odontoglossum alexandrae</i> (= <i>crispum</i>) | Orchidaceae Fl B MS |
| 2322d | \$10 | <i>Trichocentrum</i> (= <i>Oncidium</i>) <i>margalefii</i> | Orchidaceae Fl B MS |
| 2347 | SS \$40 | <i>Coelogyne asperata</i> | Orchidaceae Fl B SS |
| | Margin | R: Bamboo Orchid, <i>Arundina graminifolia</i> | Orchidaceae Fl Z SS |
| | | 2017 August 21 (Ptgs by Edgar Degas) (MS/4 & SS/1) | |
| 2335a | \$10 | U/I flowers ("Woman Seated Beside a Vase of Flowers") | Fl U B MS |
| SWEDEN | | 2017 August 24 (Apples) (Coil Single & Bklt/5) | |
| 2803 | 5k | Apple, <i>Malus domestica</i> (perf 13¾×13½) | Rosaceae Fr A |
| 2804a | 21k | Apple, <i>Malus domestica</i> (seeds, apple, cider, applesauce) | Rosaceae Fr A |
| 2804b | 21k | Same species (seeds, peel, slices) | Fr A |
| 2804c | 21k | Same species (seeds, peel, halved apples) | Fr A |
| 2804d | 21k | Same species (halved apples for printing) | Fr A |
| 2804e | 21k | Same species (apple pie) | Fr A |
| 2804 | | Bklt/5+5 etiquettes (Sc#2804a-e) (die cut 13½) (s/a) | |
| | | 2017 August 24 (Medicinal Plants) (SS/3) | |
| 2806a | 21k | Plantain, <i>Plantago major</i> | Plantaginaceae Fl V A SS |
| 2806b | 21k | St. John's Wort, <i>Hypericum perforatum</i> | Hypericaceae Fl V A SS |
| 2806c | 21k | Foxglove, <i>Digitalis purpurea</i> | Plantaginaceae Fl V A SS |
| SWITZERLAND | | 2017 September 7 (Woman Holding Quince) (SS/1) | |
| 1653 | 200c | Quince, <i>Cydonia oblonga</i> (impregnated w/ quince scent) | Rosaceae Fr B SS |

UNITED STATES**2017 August 3** (Protect Pollinators) (Vert strip/5)

| | | | | |
|------|-------|---------------------------------------------------------------------|------------|------|
| 5228 | (49c) | Purple Coneflower, <i>Echinacea purpurea</i> (w/ Monarch butterfly) | Asteraceae | Fl B |
| 5229 | (49c) | Golden Ragwort, <i>Packera aurea</i> (w/ honeybee) | Asteraceae | Fl B |
| 5230 | (49c) | Zinnia, <i>Zinnia elegans</i> (w/ Monarch butterfly) | Asteraceae | Fl B |
| 5231 | (49c) | New England Aster, <i>Symphotrichum novae-angliae</i> (w/ bee) | Asteraceae | Fl B |
| 5232 | (49c) | Goldenrod, <i>Solidago</i> sp. (w/ Monarch butterfly) | | Fl B |

2017 August 16 (Flowers from the Garden) (Coil strip/4 & Bklt/20)

| | | | | |
|-------|-------|---------------------------------------------------|---------------|------|
| 5233 | (49c) | Camellias, <i>Camellia japonica</i> | Theaceae | Fl B |
| | | Forsythia, <i>Forsythia × intermedia</i> | Oleaceae | Fl B |
| 5234 | (49c) | Peonies, <i>Paeonia officinalis</i> | Paeoniaceae | Fl B |
| | | Tree Peonies, <i>Paeonia × suffruticosa</i> | Paeoniaceae | Fl B |
| 5235 | (49c) | Hydrangeas, <i>Hydrangea macrophylla</i> | Hydrangeaceae | Fl A |
| 5236 | (49c) | Hydrangeas, <i>Hydrangea macrophylla</i> | Hydrangeaceae | Fl B |
| | | Roses, <i>Rosa</i> sp. | Rosaceae | Fl B |
| | | Hypericum Berries, <i>Hypericum acmosepalum</i> | Hypericaceae | Fr B |
| | | Lisianthus, <i>Eustoma grandiflorum</i> | Gentianaceae | Fl B |
| 5236a | | Strip/4 (Sc#5223–26) (die cut 10 ^{3/4}) | | |
| 5237 | (49c) | Camellias, <i>Camellia japonica</i> | Theaceae | Fl B |
| | | Forsythia, <i>Forsythia × intermedia</i> | Oleaceae | Fl B |
| 5238 | (49c) | Hydrangeas, <i>Hydrangea macrophylla</i> | Hydrangeaceae | Fl B |
| | | Roses, <i>Rosa</i> sp. | Rosaceae | Fl B |
| | | Hypericum Berries, <i>Hypericum acmosepalum</i> | Hypericaceae | Fr B |
| | | Lisianthus, <i>Eustoma grandiflorum</i> | Gentianaceae | Fl B |
| 5239 | (49c) | Peonies, <i>Paeonia officinalis</i> | Paeoniaceae | Fl B |
| | | Tree Peonies, <i>Paeonia × suffruticosa</i> | Paeoniaceae | Fl B |
| 5240 | (49c) | Hydrangeas, <i>Hydrangea macrophylla</i> | Hydrangeaceae | Fl A |
| 5240a | | Block/4 (Sc#5237–40) (die cut 11) | | |
| 5240b | | Bklt/20 (5ea Sc#5237–40) | | |

URUGUAY**2017 February 16** (160th anniv. Diplomatic Relations w/ Russia) (SS/2)

| | | | | |
|------|--------|---------------------------------------------------------|------------|---------|
| 2589 | Margin | UR: Marguerite Daisies, <i>Argyranthemum frutescens</i> | Asteraceae | FL Z SS |
|------|--------|---------------------------------------------------------|------------|---------|

**ANIMALS; DOGS & CATS; HORSES; INSECTS; BUGS
 BUTTERFLIES; MALARIA; FLOWERS & PLANTS; ORCHIDS
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NEW PLANTS IN THE PHILATELIC HERBARIUM

Christopher E. Dahle, BU1269

This is the second edition of this column. The columns get to be rather large files, so I am trying to limit them to three pages. There are already over more than plants to describe just in the Botany New Issues lists of 2017.



Phlebotobium maclovianum. BRASSICACEAE Falkland Rock Cress
Synonyms: *Arabis macloviana* and *Erysimum maclovianum*

Endemic to Falkland Islands. Only species in the genus. Perennial, small nondescript plant, 45–60 cm, with white flowers and dark green alternate leaves.

Falkland Islands Sc#1173. Endemic Plants issue 21 November 2016, Set/6 and SS/6. Designed by Leigh-Anne Wolfaardt. Printer: BDT International Security Printing in Dublin Ireland in sheets of 20. Process: Lithography. Perf 14.



Nastanthus falklandicus. CALYCERACEAE False Plantain

Endemic occurring only along the southwest coast of West Falkland and two nearby small Islands. Grows in exposed, coastal sites in well-drained soils and has long taproots. Hemispherical cluster of tightly packed white flowers.

Falkland Islands Sc#1175. Endemic Plants issue 21 November 2016, Set/6 and SS/6.



Hamadryas argentea. RANUNCULACEAE Silvery Buttercup
Synonyms: *Hamadryas tomentosa*

Widespread but scarce. Grows in maritime cliff and slope habitats, inland rock, acid grassland (upland), dwarf shrub heath, Fachine scrub, cushion heath (upland), and fern beds. Grows in a rosette with three-lobed silvery leaves. Dioecious, often with populations of a single gender.

Falkland Islands Sc#1176. Endemic Plants issue 21 November 2016, Set/6 and SS/6.



Nassauvia serpens. ASTERACEAE Snakeplant

Endemic to Falklands. Found at sites near running water and is found across an altitudinal range of 5–700 m. Rhizomatous perennial with leafy stems 30–50 cm long. Leaves oblong-lanceolate rigid, 1.2–1.8 cm by 5–8 mm, velvety surfaces. Inflorescence ovoid, 2.5 cm in diameter with a pronounced and pleasant aroma.

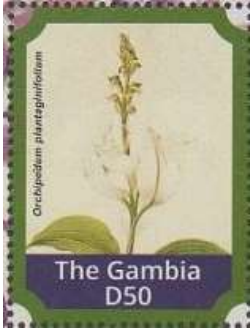
Falkland Islands Sc#1177. Endemic Plants issue 21 November 2016, Set/6 and SS/6.



Nassauvia falklandica. ASTERACEAE Falkland Nassauvia

Described in 2009. Only on upland sites in two hill ranges on West Falkland. About 250 plants. Grows in montane habitat at 400–500 m. Flower heads are grouped into globular clusters at the end of stems. Only 6 cm in height. Unique stomata on sunken hair-filled surfaces on the undersides of otherwise hairless leaves.

Falkland Islands Sc#1178. Endemic Plants issue 21 November 2016, Set/6 and SS/6.



***Orchipedium plantaginifolium*. ORCHIDACEAE**

Synonyms: *Queteletia plantaginifolia*

Found in Malaysian peninsula and Java at elevations 400–600 m. Original description in 1829 from Java. Plant to 50 cm tall. Rachis with many flowers to 15 cm. Green leaves and sepals, petals and lip white.

Gambia Sc#3679. Orchids issued 7 December 2015 in MS/4.



***Hypericum empetrifolium*. HYPERICACEAE St John's Wort**

Range Greece and Aegean Islands. Perennial evergreen subshrub to 1 m tall, found from 0–2000 m in poor or dry soil and woodland. Linear leaves 4–12 mm. Yellow flowers 1–2 cm in late summer and autumn.

Greece Sc#2765. Denomination 50c. Blooming Herbs of the Greek Islands issued 15 December 2016 in a Set/6. Printer: Veridos Matsoukis S.A. Security Printing, Athens, in sheets of 25. Perf 14.



***Sideritis clandestina*. LAMIACEAE Ironwort**

Synonyms: Four synonyms

Found in the mountains of the Peloponnese. Rosettes of oblong white leaves of about 4 cm long give rise to erect, white stems to about 25 cm tall, with one to two pairs of linear, wide-spaced leaves 3–6 cm long. Used for making herbal tea.

Greece Sc#2766. Denomination 72c. Blooming Herbs of the Greek Islands issue of 15 December 2016.



***Charianthus grenadensis*.**

MELASTOMATACEAE

Synonyms: *Charianthus purpureus* var. *brevisetosus*

Endemic to Granada. Found in higher elevation cloud forest. Shrub ca. 2.5 m to tree 10 m tall. Flowers red-orange or with calyx maroon, petals cream-yellow tinged heavily with pink-salmon, giving the flower an orange appearance.

Grenada Grenadines Sc#2969a. Denomination \$7. Flowers of Grenada (Carriacou) issue of 9 September 2016 in MS/6 and SS/2.



Esmeralda cathcartii. ORCHIDACEAE Cathcart's Arachnanthe
Synonyms: *Arachnanthe cathcartii*, *Arachnis cathcartii*, *Vanda cathcartii*

Himalayan endemic. Long-lasting flowers. Used for hybridization in horticulture.

India Sc#2832. Denomination 5 rupees. Orchids issue of 8 August 2016. Printer: Security Printing Press, Hyderabad. Process: Wet offset. 25,250 MS printed.



Paphiopedilum vilosum. ORCHIDACEAE Hirsute Paphiopedilum
Synonyms: Ten synonyms

Range Assam, southern China, and Myanmar at elevations of 1200–1500 m. Epiphytic. Blooms in spring. Flower 15 cm. Many horticultural varieties.

India Sc#2833. Denomination 5 rupees. Orchids issue of 8 August 2016 in MS/6 with SS/1.



Dendrobium gibsonii. ORCHIDACEAE Gibson's Dendrobium
Synonyms: Six synonyms including *Callista gibsonii* and *Dendrobium fuscatum*

Native to China (Guangxi and Yunnan provinces), the Himalayas (Nepal, Bhutan, India, Assam), and northern Indochina (Myanmar, Thailand, Laos, Vietnam) elevations of 650 to 1,650 m. Flowers spring to summer with 6–15 yellow blooms, each 5 cm wide.

India Sc#2834. Denomination 15 rupees. Orchids issue of 8 August 2016 in MS/6 with SS/1.



Cypripedium himalaicum. ORCHIDACEAE Himalayan Cypripedium
Synonym: *Cypripedium macranthon* var. *himalaicum*

Grows on limestone boulders, crevices, and slopes in Nepal, Northern India, Bhutan, and in Xizang in China at 2800 to 4900 m.

India Sc#2836. Denomination 15 rupees. Orchids issue of 8 August 2016 in MS/6 with SS/1.



Amorphophallus paeoniifolius. ARACEAE Elephant Foot Yam, Corpse Flower
Synonyms: 33 synonyms

A striking aroid with a flower spike crowned with a bulbous maroon knob and encircled by a fleshy maroon and green-blotched bract. The solitary leaf, which emerges after the flowering parts, resembles a small tree. Cultivated for centuries in the Asian and IndoPacific region and its natural distribution has been totally obscured. Grows 25 m tall from underground tuber in a very wide

range of moist, semi-shaded to open, secondary and disturbed forests, shrublands, scrubs, and grasslands, from sea level to ca 700 m.

Indonesia Sc#2438b. Denomination 3000 rupiahs. Flora and Fauna issue of 5 November 2015 in a Set/2 and SS/1.

BIOLOGY QUIZ

Here is a little quiz to test your general biology knowledge. Answers are on page 321.

1. In terms of deaths, injuries, and damage to property, what is the most dangerous mammal in North America?
 - a. Grizzly Bear
 - b. Gray Wolf
 - c. White-tailed Deer
 - d. Brown Rat

2. How long can the average human survive without drinking any water?
 - a. three days
 - b. four days
 - c. five days
 - d. one week

3. What does it mean if an animal is crepuscular?
 - a. They move by creeping on all fours
 - b. They are only active during the day
 - c. They are suffering from skin infections
 - d. They are most active during twilight hours

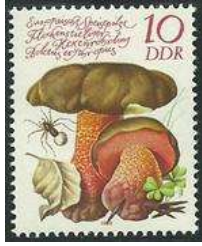
4. Which of the following groups contains mammals that lay eggs?
 - a. Marsupial
 - b. Rodentia
 - c. Chiroptera
 - d. Monotremes

5. Which of the following groups would contain the largest number of organisms?
 - a. Family
 - b. Order
 - c. Phylum
 - d. Class

6. What do plants and animals have in common?
 - a. Both are prokaryotic
 - b. Both are eukaryotic
 - c. Both are autotrophic
 - d. Both are heterotrophic

7. The number of chromosomes found in an unfertilized human egg cell is:
 - a. 92
 - b. 12.5
 - c. 23
 - d. 46

8. Which order of mammals has the largest number of species?
 - a. Insectivora
 - b. Chiroptera
 - c. Carnivora
 - d. Rodentia

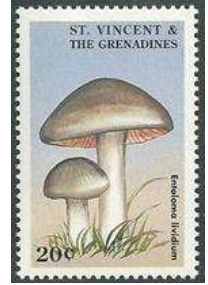


FUNGI

Editor

Dr. Paul A. Mistretta, BU1681

New Listings



Scott# Denom Common Name/Scientific Name Family Code
 [Ed. Note: Occasionally in this section and also in the Herpetology section, we will note a species that is known to be poisonous by marking it with a (☠) symbol. One should not infer that other species that are not so marked are non-poisonous or safe to handle/eat.]

ALGERIA

2017 May 15 (Prevention of Food Poisoning)

1711 25d U/I Mushroom among foodstuffs U C

ANTIGUA

2016 May 11 (Mushrooms) (MS/6, MS/4 & SS/1)

| | | | | |
|-------|---------|----------------------------------------------------------------|------------------|---|
| 3325a | \$3.15 | Weeping Bolete, <i>Suillus granulatus</i> | Boletaceae | A |
| 3325b | \$3.15 | Saffron Milk Cap, <i>Lactarius deliciosus</i> | Russulaceae | A |
| 3325c | \$3.15 | Black Trumpet, <i>Craterellus cornucopioides</i> | Cantharellaceae | A |
| 3325d | \$3.15 | Parasol Mushroom, <i>Macrolepiota procera</i> | Agaricaceae | A |
| 3325e | \$3.15 | Green-cracking Russula, <i>Russula virescens</i> | Russulaceae | A |
| 3325f | \$3.15 | Common Puffball, <i>Lycoperdon perlatum</i> | Agaricaceae | A |
| 3325 | Margin | LL: Saffron Milk Cap, <i>Lactarius deliciosus</i> | Russulaceae | Z |
| | | LR: Parasol Mushroom, <i>Macrolepiota procera</i> | Agaricaceae | Z |
| 3326a | \$3.25 | Red-capped Scaber Stalk, <i>Leccinum aurantiacum</i> | Lycoperdaceae | A |
| 3326b | \$3.25 | Porcino, <i>Boletus edulis</i> | Boletaceae | A |
| 3326c | \$3.25 | Fly Agaric, <i>Amanita muscaria</i> (☠) | Amanitaceae | A |
| 3326d | \$3.25 | Golden Tops or Magic Mushrooms, <i>Psilocybe cubensis</i> | Hymenogastraceae | A |
| 3326 | Margin | LR: Red-capped Scaber Stalk, <i>Leccinum aurantiacum</i> | Lycoperdaceae | Z |
| | | LL: Golden Tops or Magic Mushrooms, <i>Psilocybe cubensis</i> | Hymenogastraceae | Z |
| 3327 | SS \$10 | Chanterelle, <i>Cantharellus cibarius</i> (also in Bot margin) | Cantharellaceae | A |

BOSNIA & HERZEGOVINA (Serb) 2016 November 25 (Mushrooms) (Block/4)

| | | | | |
|------|------|------------------------------------------------------|-----------------|---|
| 556a | 90pf | Oyster Mushroom, <i>Pleurotus ostreatus</i> | Pleurotaceae | A |
| 556b | 90pf | Chanterelle, <i>Cantharellus cibarius</i> | Cantharellaceae | A |
| 556c | 90pf | Reishi or Lingzhi Mushroom, <i>Ganoderma lucidum</i> | Ganodermataceae | A |
| 556d | 90pf | Turkey Tail, <i>Trametes versicolor</i> | Polyporaceae | A |

SIERRA LEONE

2015 August 21 (Mushroom) (MS/4 & SS/1)

| | | | | |
|-------|------------|---------------------------------------------------------------|-----------------|---|
| 3402a | 5500le | Chanterelle, <i>Cantharellus cibarius</i> | Cantharellaceae | A |
| 3402b | 5500le | Sweet Tooth or Wood Hedgehog, <i>Hydnum repandum</i> | Hydnaceae | A |
| 3402c | 5500le | Suede Bolete or Brown Bolete, <i>Xerocomus subtomentosus</i> | Boletaceae | A |
| 3402d | 5500le | Common Morel, <i>Morchella esculenta</i> | Morchellaceae | A |
| 3422 | SS 22000le | Pine Bolete or Pinewood King Bolete <i>Boletus pinophilus</i> | Boletaceae | A |
| | Margin | R: Fly Agaric, <i>Amanita muscaria</i> (☠) | Amanitaceae | Z |

2015 October 23 (Birds & Mushrooms) (MS/4 & SS/1)

| | | | | |
|------|-----------|----------------------------------------------------------------|-------------|-----|
| 3465 | Margin | LR: U/I Mushroom (<i>Amanita</i> sp.?) (w/ Birds of Paradise) | Amanitaceae | U Z |
| 3485 | SS Margin | LR: U/I Mushroom (<i>Amanita</i> sp.?) (w/ Birds of Paradise) | Amanitaceae | U Z |
| 3482 | Margin | LR: U/I Mushroom (<i>Amanita</i> sp.?) (w/ Guineafowl) | Amanitaceae | U Z |
| 3502 | SS Margin | LR: U/I Mushroom (<i>Amanita</i> sp.?) (w/ Guineafowl) | Amanitaceae | U Z |
| 3499 | SS Margin | LR: U/I Mushroom (<i>Amanita</i> sp.?) (w/ Hornbill) | Amanitaceae | U Z |

Note: Sc#3479 the MS/4 that goes with this SS does not have the mushrooms

SIERRA LEONE (continued)

2015 December 21 (Mycologist & Mushrooms) (MS/4 & SS/2)

| | | | | |
|-------|------------|-------------------------------------------------------------------|-----------------|-----|
| 3558a | 6500le | <i>Penicillium</i> sp. (w/ Sir Alexander Fleming portrait) | Trichocomaceae | B |
| 3558b | 6500le | U/I tree mushroom (w/ Fleming's Nobel Prize medal) | | U B |
| 3558c | 6500le | Lumpy Bracket, <i>Polyporus umbellatus</i> (w/ battlefield items) | Polyporaceae | B |
| 3558d | 6500le | Reishi or Lingzhi Mushroom, <i>Ganoderma lucidum</i> (w/ Fleming) | Ganodermataceae | B |
| 3578 | SS 26000le | Lion's Mane or Bearded Tooth, <i>Hericium erinaceus</i> | Hericiaceae | B |

2015 August 21 (23rd World Scout Jamboree) (SS/1)

| | | | | |
|------|-----------|---------------------------------|-----------------|-----|
| 3582 | SS Margin | LR: U/I mushroom (w/ Boy Scout) | Cantharellaceae | U Z |
|------|-----------|---------------------------------|-----------------|-----|

2016 February 26 (Mushrooms) (SS/1)

| | | | | |
|------|-----------|-----------------------------------------------|-----------------|-----|
| 3651 | SS Margin | Ctr: U/I mushrooms (w/ Baden Powell & Scouts) | Cantharellaceae | U Z |
|------|-----------|-----------------------------------------------|-----------------|-----|

2016 August 29 (Mushrooms) (MS/4 & SS/1)

| | | | | |
|-------|------------|-------------------------------------------------------|-----------------|-----|
| 3902a | 6000le | Chanterelle, <i>Cantharellus cibarius</i> | Cantharellaceae | A |
| 3902b | 6000le | Amethyst Deceiver, <i>Laccaria amethystina</i> | Hydnangiaceae | A |
| 3902c | 6000le | no common name, <i>Entoloma hochstetteri</i> (♀) | Entolomataceae | A |
| 3902d | 6000le | Oyster Mushroom, <i>Pleurotus ostreatus</i> | Pleurotaceae | A |
| 3922 | SS 24000le | Bamboo Pith or Veiled Lady, <i>Phallus indusiatus</i> | Phallaceae | A |
| | Margin | UL: Oyster Mushroom, <i>Pleurotus ostreatus</i> | Pleurotaceae | Z |
| | | UR: Chanterelle, <i>Cantharellus cibarius</i> | Cantharellaceae | Z |
| | | Bot: U/I bolete mushrooms (in collecting basket) | | U Z |

2016 December 29 (Scouting & Mushrooms) (MS/4 & SS/2)

| | | | | |
|-------|------------|-----------------------------------------------------------------------------|------------------|---|
| 4067a | 6000le | Bay Bolete, <i>Imleria badia</i> (w/ Scout) (Cap: <i>Xerocomus badius</i>) | Boletaceae | B |
| 4067b | 6000le | Gypsy Mushroom, <i>Cortinarius caperatus</i> (w/ Scout) | Cortinariaceae | B |
| 4067c | 6000le | Oyster Mushroom, <i>Pleurotus ostreatus</i> (w/ Scout) | Pleurotaceae | B |
| 4067d | 6000le | Chanterelle, <i>Cantharellus cibarius</i> (w/ Scout) | Cantharellaceae | B |
| 4086 | SS 24000le | Wood Blewit <i>Clitocybe nuda</i> (Cap: <i>Lepista nuda</i>) | Tricholomataceae | B |
| | Margin | Ctr: Bitter Bolete, <i>Tylopilus felleus</i> | Boletaceae | Z |
| | | LR: Honey Fungus, <i>Armillaria mellea</i> | Physalacriaceae | Z |

SOLOMON ISLANDS

2017 August 21 (Stamps-on-Stamps) (MS/4)

| | | | | |
|------|--------|---------------------------|--|-------|
| 2337 | Margin | Bot: U/I mushroom (s-o-s) | | C U Z |
|------|--------|---------------------------|--|-------|

TUVALU

2016 November 25 (Pacific Jellyfish) (MS/4 & SS/2)

| | | | | |
|-------|-----------|-------------------------------------------------------------------|---------------|---|
| 1376a | \$2.50 | Northern Sea Nettle, <i>Chrysaora melanaster</i> (look-alike) | Pelagiidae | X |
| 1376b | \$2.50 | Lion's Mane Jellyfish, <i>Cyanea capillata</i> (look-alike) | Cyaneidae | X |
| 1376c | \$2.50 | Mauve Stinger, <i>Pelagia noctiluca</i> (look-alike) | Pelagiidae | X |
| 1376d | \$2.50 | Jelly Blubber, <i>Catostylus mosaicus</i> (look-alike) | Catostylidae | X |
| 1377a | SS \$4.50 | White-spotted Jellyfish, <i>Phyllorhiza punctata</i> (look-alike) | Mastigiidae | X |
| 1377b | SS \$4.50 | Sea Wasp, <i>Chironex fleckeri</i> (♀) (look-alike) | Chirodropidae | X |



Two easily missed recent issues with mushrooms in the design: Madagascar SS (2016) commemorating Charles Darwin and United Nations (New York) (2017) \$1.15 World Food Day stamp





MAMMALIA

Editor

Michael Prince, LM68



I have altered the Sperm Whale entries from *Physeter macrocephalus* to *Physeter catodon*. Because I use Wilson and Reeder, *Mammal Species of the World*, they cite *P. catodon* as having line preference over *P. macrocephalus*. I tried looking at various entries on line, but there still does not seem to be much consensus as to which to use. Both names were used by Linnaeus and presumably *P. catodon* has preference.

Regarding the listing, readers will obviously have noted that I only list wild mammal species. When Dave Meixner gave up listing Mammalia, I had no listing to use to describe new mammals on stamps. I hoped that someone in the USA or Canada would take up the job, but as several *Biophilately* issues arrived with no Mammal entries, I decided to offer a partial service of mammal identifications.

At that time I probably did not have a computer and my descriptions of mammals came from books or the stamps themselves. As my main stamp collection was, and still is, Wild Life – Fauna and Flora, which as you can imagine is a vast subject, I was only prepared to deal with wild species from my own collection. My restrictions in collecting are that species must be wild and identifiable, which leaves out domestic and farm mammals as well as cartoon and other small illustrations.

I indicated when I agreed to become Associate Editor that if anyone else wished to co-edit for domestic, farm, and other mammals I would be quite happy to have a joint editorship. No one has ever offered and I have received no complaints over the years for my partial listing of mammals. While it is much easier to compile a listing these days with the amount of information available on line, I would rather continue just listing wild mammal species.

I mention these details as you may wonder why I do not include all mammal entries. As before, if anyone would like to list those mammal items I omit I am quite happy for them to do so and would communicate with them as to which items are included in my listing.

New Listings

| Scott# | Denom | Common Name/Scientific Name | Family/Subfamily | Code |
|-------------------------------------------------------------------------------------------------------------------------|---------|----------------------------------------------------|------------------|------|
| ANTIGUA 2016 May 25 (Marine Mammals) (MS/6, MS/4, & SS/1) | | | | |
| 3328a | \$3.15 | Sperm Whale, <i>Physeter catodon</i> | Physteridae | A |
| 3328b | \$3.15 | Dugong, <i>Dugong dugon</i> | Dugongidae | A |
| 3328c | \$3.15 | Spinner Dolphin, <i>Stenella longirostris</i> | Delphinidae | A |
| 3328d | \$3.15 | Harbor Porpoise, <i>Phocoena phocoena</i> | Phocoenidae | A |
| 3328e | \$3.15 | Humpback Whale, <i>Megaptera novaeangliae</i> | Balaenopteridae | A |
| 3328f | \$3.15 | West Indian Manatee, <i>Trichechus manatus</i> | Trichechidae | A |
| 3329a | \$3.25 | California Sea Lion, <i>Zalophus californianus</i> | Ursidae | A |
| 3329c | \$3.25 | Northern Fur Seal, <i>Callorhinus ursinus</i> | Otariidae | A |
| 3329d | \$3.25 | Harp Seal, <i>Pagophilus groenlandicus</i> | Phocidae | A |
| 3330 | SS \$10 | Walrus, <i>Odobenus rosmarus</i> | Odobenidae | A |
| BANGLADESH 2016 August 10 (Rare Animals of Bangladesh) (MS/4) | | | | |
| Scott Catalogue is not listing this issue as MS/4 was sold for 100t. Each species are also depicted on sheetlet border. | | | | |
| n/a | 10t | Asian Golden Cat, <i>Catopuma temminckii</i> | Felidae | A |
| n/a | 10t | Clouded Leopard, <i>Neofelis nebulosa</i> | Felidae | A |
| n/a | 10t | Sambar, <i>Rusa unicolor</i> | Cervidae | A |
| n/a | 10t | Large Indian Civet, <i>Viverra zibetha</i> | Viverridae | A |

| | | | | |
|-------------------------------------------------------------------------------------------------|------------|-------------------------------------------------------------------------|------------------|---------|
| BELARUS | | 2017 April 27 (Endangered Animals from Red Book) (Horiz strip/4) | | |
| 1044a | (42k) | Common Hamster, <i>Cricetus cricetus</i> | Cricetidae | A |
| 1044b | (1.02r) | Stoat(Ermine), <i>Mustela erminea</i> | Mustelidae | A |
| 1044c | (1.26r) | Eurasian Badger, <i>Meles meles</i> | Mustelidae | A |
| 1044d | (1.38r) | Brown Bear, <i>Ursus arctos</i> | Ursidae | A |
| BHUTAN | | 2016 October 18 (National Flora & Fauna) (MS/4 & SS/1) | | |
| 1556d | 30nu | Takin, <i>Budorcas taxicolor</i> | Bovidae | A |
| 1560 | 60nu | Takin, <i>Budorcas taxicolor</i> | Bovidae | A |
| BOTSWANA | | 2017 February 28 (Leopards) (Set/4 & SS/4) (perf 14½×14) | | |
| 1018 | 4p | Leopard, <i>Panthera pardus</i> | Felidae | A |
| 1019 | 5.90p | Leopard, <i>Panthera pardus</i> | Felidae | A |
| 1020 | 8p | Leopard, <i>Panthera pardus</i> | Felidae | A |
| 1021 | 10p | Leopard, <i>Panthera pardus</i> | Felidae | A |
| 1021a | | SS/4 (Sc#1018–21) (perf 14) | | |
| BRITISH ANTARCTIC TERR. | | 2016 November 13 (Marine Life of Antarctic Ocean Zones) (MS/12) | | |
| 526c | 66p | Weddell Seal, <i>Leptonychotes weddellii</i> | Phocidae | A |
| BULGARIA | | 2017 May 27 (Black Sea Marine Life) (SS/2) | | |
| 4808a | 65s | Short-beaked Common Dolphin, <i>Delphinus delphis ponticus</i> | Delphinidae | A |
| CROATIA | | 2017 March 21 (Bats) (Set/3 & 3ea Bklt/10) | | |
| 1028 | 2.80k | Blasius's Horseshoe Bat, <i>Rhinolophus blasii</i> | Rhinolophidae | A |
| 1028a | | Bklt/10 (Sc#1028) | | |
| 1029 | 3.10k | Kolombatovic's Long-eared Bat, <i>Plecotus kolombatovici</i> | Vespertilionidae | (new) A |
| 1029a | | Bklt/10 (Sc#1029) | | |
| 1030 | 6.50k | Geoffroy's Myotis, <i>Myotis emarginatus</i> | Vespertilionidae | (new) A |
| 1030a | | Bklt/10 (Sc#1030) | | |
| GEORGIA | | 2016 October 24 (Fauna) (Set/3) | | |
| 524 | 20t | Leopard, <i>Panthera pardus</i> | Felidae | A |
| GUYANA | | 2017 May 5 (20th anniv. Return Hong Kong to China) (Set/10) | | |
| 4508 | \$80 | Giant Panda, <i>Ailuropoda melanoleuca</i> | Ursidae | A |
| ISRAEL | | 2017 April 4 (Dolphin Research) (Single) | | |
| 2139 | 7.40s | Common Bottlenose Dolphin, <i>Tursiops truncatus</i> | Delphinidae | A |
| LATVIA | | 2017 June 26 (Badger) (Single) | | |
| 967 | 85c | Eurasian Badger, <i>Meles meles</i> | Mustelidae | A |
| SIERRA LEONE | | 2015 May 22 (African Wildlife) (10ea MS/6 & 20ea SS/1) | | |
| These sheets are part of a set of 19 MS/6 and 38 SS/1 depicting African wildlife and dinosaurs. | | | | |
| 3244a | 4300le | African Buffalo, <i>Syncerus caffer</i> (head w/ horn touch L frame) | Bovidae | A |
| 3244b | 4300le | Same species (entire animal) | | A |
| 3244c | 4300le | Same species (head w/ both horns in frame) | | A |
| 3244d | 4300le | Same species (w/ calf) | | A |
| 3244e | 4300le | Same species (head w/ horn touch R frame) | | A |
| 3244d | 4300le | Same species (two adults) | | A |
| 3244 | Margin | UL & UR: Same species | | Z |
| 3263 | SS 10000le | African Buffalo, <i>Syncerus caffer</i> | Bovidae | A |
| | Margin | Top: Same species | | Z |
| 3282 | SS 14000le | African Buffalo, <i>Syncerus caffer</i> | Bovidae | A |
| | Margin | Top: Same species | | Z |

SIERRA LEONE (continued)

| | | | | |
|-------|------------|-------------------------------------------------------------------------|----------------|---------|
| 3245a | 4300le | Chimpanzee, <i>Pan troglodytes</i> (sitting w/ arms crossed) | Hominidae | A |
| 3245b | 4300le | Same species (hanging) | | A |
| 3245c | 4300le | Same species (mother holding juvenile) | | A |
| 3245d | 4300le | Same species (mother carrying juvenile) | | A |
| 3245e | 4300le | Same species (adult w/ juvenile sitting) | | A |
| 3245f | 4300le | Same species (w/ hand at mouth) | | A |
| 3245 | Margin | UL: Western Gorilla, <i>Gorilla gorilla</i> | Hominidae | Z |
| | | UR: Leopard, <i>Panthera pardus</i> | Felidae | Z |
| 3264 | SS 10000le | Chimpanzee, <i>Pan troglodytes</i> | Hominidae | A |
| | Margin | UL: African Buffalo, <i>Syncerus caffer</i> | Bovidae | Z |
| | | UR: Leopard, <i>Panthera pardus</i> | Felidae | Z |
| 3283 | SS 14000le | Chimpanzee, <i>Pan troglodytes</i> | Hominidae | A |
| | Margin | Same species as Sc#3264 | | Z |
| 3246a | 4300le | Western Gorilla, <i>Gorilla gorilla</i> (walking w/ hand by ground) | Hominidae | A |
| 3246b | 4300le | Same species (on tree) | | A |
| 3246c | 4300le | Same species (mother w/ juvenile) | | A |
| 3246d | 4300le | Same species (sitting) | | A |
| 3246e | 4300le | Same species (w/ hand at mouth) | | A |
| 3246f | 4300le | Same species (standing) | | A |
| 3246 | Margin | UL & UR: Same species | | Z |
| 3265 | SS 10000le | Western Gorilla, <i>Gorilla gorilla</i> | Hominidae | A |
| | Margin | UL & UR: Same species | | Z |
| 3284 | SS 10000le | Western Gorilla, <i>Gorilla gorilla</i> | Hominidae | A |
| | Margin | UL & UR: Same species | | Z |
| 3247a | 4300le | Guinean Horseshoe Bat, <i>Rhinolophus guineensis</i> (also UR) | Rhinolophidae | (new) A |
| 3247b | 4300le | Cyclops Roundleaf Bat, <i>Hipposideros cyclops</i> | Rhinolophidae | (new) A |
| 3247c | 4300le | Little Collared Fruit Bat, <i>Myonycteris torquata</i> (also LR margin) | Pteropodidae | (new) A |
| 3247d | 4300le | Straw-colored Fruit Bat, <i>Eidolon helvum</i> | Pteropodidae | A |
| 3247e | 4300le | Mauritian Tomb Bat, <i>Taphozous mauritanus</i> | Emballonuridae | A |
| 3247f | 4300le | Yellow-winged Bat, <i>Lavia frons</i> (also UL margin) | Megadermatidae | A |
| 3266 | SS 10000le | Egyptian Rousette, <i>Rousettus aegyptiacus</i> | Pteropodidae | A |
| | Margin | Top: <i>Loxodonta africana</i> | Elephantidae | Z |
| | | UL & UR: Guinean Horseshoe Bat, <i>Rhinolophus guineensis</i> | Rhinolophidae | Z |
| | | ML: Cyclops Roundleaf Bat, <i>Hipposideros cyclops</i> | Rhinolophidae | Z |
| | | LR: Yellow-winged Bat, <i>Lavia frons</i> | Megadermatidae | Z |
| 3285 | SS 14000le | Egyptian Slit-faced Bat, <i>Nycteris thebaica</i> | Nycteridae | |
| | Margin | Same species as Sc#3266 | | Z |
| 3248a | 4300le | Leopard, <i>Panthera pardus</i> (standing looking R) | Felidae | A |
| 3248b | 4300le | Same species (w/ head on paws) | | A |
| 3248c | 4300le | Same species (standing looking L) | | A |
| 3248d | 4300le | Same species (w/ paw dangling) | | A |
| 3248e | 4300le | Same species (walking R) | | A |
| 3248f | 4300le | Same species (seated on branch) | | A |
| 3248 | Margin | UR: Same species | | Z |
| | | UL: African Wild Dog, <i>Lycaon pictus</i> | Canidae | Z |
| 3267 | SS 10000le | Leopard, <i>Panthera pardus</i> | Felidae | A |
| | Margin | UL: Same species | | Z |
| | | UR: Lion, <i>Panthera leo</i> | Felidae | Z |
| | | MR: Cyclops Roundleaf Bat, <i>Hipposideros cyclops</i> | Rhinolophidae | Z |
| 3286 | SS 14000le | Leopard, <i>Panthera pardus</i> | Felidae | A |
| | Margin | Same species as Sc#3267 | | Z |

SIERRA LEONE (continued)

| | | | | |
|-------|------------|---------------------------------------------------------------------|---------------|---|
| 3249a | 4300le | Lion, <i>Panthera leo</i> (♂ facing R roaring) | Felidae | A |
| 3249b | 4300le | Same species (♀ w/ cub) | | A |
| 3249c | 4300le | Same species (♂ resting, name UL) | | A |
| 3249d | 4300le | Same species (♂ resting, name R) | | A |
| 3249e | 4300le | Same species (♀ resting) | | A |
| 3249f | 4300le | Same species ((♂ facing L roaring) | | A |
| 3249 | Margin | UL & UR: Same species | | Z |
| | | UL: African Buffalo, <i>Syncerus caffer</i> | Bovidae | Z |
| | | UR: African Wild Dog, <i>Lycaon pictus</i> | Canidae | Z |
| | | LR: Greater Horseshoe Bat, <i>Rhinolophus ferrumequinum</i> | Rhinolophidae | Z |
| 3268 | SS 10000le | Lion, <i>Panthera leo</i> | Felidae | A |
| | | UL, LL, & UR: Same species | | Z |
| | | Top: African Buffalo, <i>Syncerus caffer</i> | Bovidae | Z |
| | | UR: Common Zebra, <i>Equus quagga</i> | Equidae | Z |
| 3287 | SS 14000le | Lion, <i>Panthera leo</i> | Felidae | A |
| | Margin | Same species as Sc#3268 | | Z |
| 3250a | 4300le | African Wild Dog, <i>Lycaon pictus</i> (standing facing forward) | Canidae | A |
| 3250b | 4300le | Same species (standing head at L) | | A |
| 3250c | 4300le | Same species (walking) | | A |
| 3250d | 4300le | Same species (standing baring teeth) | | A |
| 3250e | 4300le | Same species (two fighting) | | A |
| 3250f | 4300le | Same species (tail at L) | | A |
| 3250 | Margin | UL & UR: Same species | | Z |
| 3269 | SS 10000le | African Wild Dog, <i>Lycaon pictus</i> | Canidae | A |
| | Margin | UL & UR: Same species | | Z |
| 3288 | SS 14000le | African Wild Dog, <i>Lycaon pictus</i> | Canidae | A |
| | Margin | UL & UR: Same species | | Z |
| 3251a | 4300le | African Forest Elephant, <i>Loxodonta cyclotis</i> (facing R) | Elephantidae | A |
| 3251b | 4300le | African Bush Elephant, <i>Loxodonta africana</i> (adult & juvenile) | Elephantidae | A |
| 3251c | 4300le | Same species (raised trunk) | | A |
| 3251d | 4300le | Same species (head only) | | A |
| 3251e | 4300le | Same species (herd) | | A |
| 3251f | 4300le | African Forest Elephant, <i>Loxodonta cyclotis</i> (facing L) | Elephantidae | A |
| 3251 | Margin | UL: African Buffalo, <i>Syncerus caffer</i> | Bovidae | Z |
| | | UR: African Bush Elephant, <i>Loxodonta africana</i> | Elephantidae | Z |
| 3270 | SS 10000le | African Bush Elephant, <i>Loxodonta africana</i> | Elephantidae | A |
| | Margin | Top: Same species | | Z |
| 3289 | SS 14000le | African Bush Elephant, <i>Loxodonta africana</i> | Elephantidae | A |
| | Margin | Top: Same species | | Z |
| 3252a | 4300le | Pantropical Spotted Dolphin, <i>Stenella attenuata</i> | Delphinidae | A |
| 3252b | 4300le | Long-beaked Common Dolphin, <i>Delphinus capensis</i> | Delphinidae | A |
| 3252c | 4300le | Risso's Dolphin, <i>Grampus griseus</i> | Delphinidae | A |
| 3252d | 4300le | Hourglass Dolphin, <i>Lagenorhynchus cruciger</i> | Delphinidae | A |
| 3252e | 4300le | Common Bottlenose Dolphin, <i>Tursiops truncatus</i> | Delphinidae | A |
| 3252f | 4300le | Hourglass Dolphin, <i>Lagenorhynchus cruciger</i> | Delphinidae | A |
| 3252 | Margin | UL: Atlantic Humpbacked Dolphin, <i>Sousa teuszii</i> | Delphinidae | Z |
| 3271 | SS 10000le | Risso's Dolphin, <i>Grampus griseus</i> | Delphinidae | A |
| | Margin | UL: Atlantic Humpbacked Dolphin, <i>Sousa teuszii</i> | Delphinidae | Z |
| | | UL: Risso's Dolphin, <i>Grampus griseus</i> | Delphinidae | Z |
| 3290 | SS 14000le | Atlantic Humpbacked Dolphin, <i>Sousa teuszii</i> | Delphinidae | A |
| | Margin | Same species as Sc#3271 | | Z |

SIERRA LEONE (continued)

| | | | | |
|-------|------------|----------------------------------------------------------------------|---------------|---|
| 3253a | 4300le | African Manatee, <i>Trichechus senegalensis</i> (two adults name LR) | Trichechidae | A |
| 3253b | 4300le | Same species (one adult) | | A |
| 3253c | 4300le | Same species (adult w/ juvenile) | | A |
| 3253d | 4300le | Same species (two adults, one tail hidden) | | A |
| 3253e | 4300le | Same species (two adults, both tails visible) | | A |
| 3253f | 4300le | Same species (two adults name R) | | A |
| 3253 | Margin | UL: Western Gorilla, <i>Gorilla gorilla</i> | Hominidae | Z |
| | | UR: Lion, <i>Panthera leo</i> | Felidae | Z |
| | | LR: Greater Horseshoe Bat, <i>Rhinolophus ferrumequinum</i> | Rhinolophidae | Z |
| 3272 | SS 10000le | African Manatee, <i>Trichechus senegalensis</i> | Trichechidae | A |
| | Margin | Same species as Sc#3253 | | Z |
| 3291 | SS 14000le | African Manatee, <i>Trichechus senegalensis</i> | Trichechidae | A |
| | Margin | Same species as Sc#3253 | | Z |

2015 August 21 (Fauna & Flora) (5ea MS/4 & 5ea SS/1)

These sheets are part of a set of 20 MS/4 and 20 SS/1 depicting flora and fauna.

| | | | | |
|-------|------------|---------------------------------------------------------------------|-----------------|---|
| 3383a | 5500le | Giant Panda, <i>Ailuropoda melanoleuca</i> (adult on tree, head UL) | Ursidae | A |
| 3383b | 5500le | Same species (adult & juvenile) | | A |
| 3383c | 5500le | Same species (adult on tree, head Ctr) | | A |
| 3383d | 5500le | Same species (adult w/ head between branches) | | A |
| 3383 | Margin | UL: Same species | | Z |
| 3403 | SS 22000le | Giant Panda, <i>Ailuropoda melanoleuca</i> | Ursidae | A |
| | Margin | UL & R: Same species | | Z |
| 3384a | 5500le | Spotted Seal, <i>Phoca largha</i> | Phocidae | A |
| 3384b | 5500le | South African Fur Seal, <i>Arctocephalus pusillus</i> | Otariidae | A |
| 3384c | 5500le | Subantarctic Fur Seal, <i>Arctocephalus tropicalis</i> | Otariidae | A |
| 3384d | 5500le | Crabeater Seal, <i>Lobodon carcinophagus</i> | Phocidae | A |
| 3404 | SS 22000le | Harbor Seal, <i>Phoca vitulina</i> | Phocidae | A |
| | Margin | R: Crabeater Seal, <i>Lobodon carcinophagus</i> | Phocidae | Z |
| 3385a | 5500le | Tiger, <i>Panthera tigris</i> (facing R w/ raised paw) | Felidae | A |
| 3385b | 5500le | Same species (resting w/ open mouth) | | A |
| 3385c | 5500le | Same species (running L) | | A |
| 3385d | 5500le | Same species (walking R) | | A |
| 3405 | SS 22000le | Tiger, <i>Panthera tigris altaica</i> | Felidae | A |
| | Margin | R: Same species | | Z |
| 3389a | 5500le | Humpback Whale, <i>Megaptera novaeangliae</i> | Balaenopteridae | A |
| 3389b | 5500le | Grey Whale, <i>Eschrichtius robustus</i> | Eschrichtiidae | A |
| 3389c | 5500le | Sperm Whale, <i>Physeter catodon</i> | Physeteridae | A |
| 3389d | 5500le | Blue Whale, <i>Balaenoptera musculus</i> | Balaenopteridae | A |
| 3409 | SS 22000le | Bryde's Whale, <i>Balaenoptera edeni</i> | Balaenopteridae | A |
| | Margin | UL & UR: Humpback Whale, <i>Megaptera novaeangliae</i> | Balaenopteridae | Z |
| 3400a | 5500le | Snow Leopard, <i>Panthera uncia</i> | Felidae | A |
| 3400b | 5500le | Galapagos Sea Lion, <i>Zalophus wollebaeki</i> | Otariidae | A |
| 3400d | 5500le | Sumatran Orangutan, <i>Pongo abelii</i> | Hominidae | A |
| 3420 | SS 22000le | Black Rhinoceros, <i>Diceros bicornis</i> | Rhinocerotidae | A |
| | Margin | R: Asiatic Elephant, <i>Elephas maximus indicus</i> | Elephantidae | Z |

SIERRA LEONE**2016 January 28** (Fauna) (11ea MS/4 & 11ea SS/1)

These sheets are part of a set of 20 MS/4 and 20 SS/1 depicting wildlife.

| | | | | |
|-------|--------|--------------------------------------------------------------|----------------|---|
| 3587a | 6000le | Hippopotamus, <i>Hippopotamus amphibius</i> (facing forward) | Hippopotamidae | A |
| 3587b | 6000le | Same species (facing R) | | A |

SIERRA LEONE (continued)

| | | | | |
|-------|------------|--------------------------------------------------------------------|-----------------|---|
| 3587c | 6000le | Same species (facing L) | | A |
| 3587d | 6000le | Same species (adult & juvenile) | | A |
| 3587 | Margin | L: Same species | | Z |
| 3607 | SS 24000le | Hippopotamus, <i>Hippopotamus amphibius</i> (also in R margin) | Hippopotamidae | A |
| 3588a | 6000le | Red River Hog, <i>Potamochoerus porcus</i> (facing R) | Suidae | A |
| 3588b | 6000le | Same species (two hogs, name in white) | | A |
| 3588c | 6000le | Same species (two hogs, name in black) | | A |
| 3588d | 6000le | Same species (facing L) | | A |
| 3588 | Margin | L: Same species | | Z |
| 3608 | SS 24000le | Red River Hog, <i>Potamochoerus porcus</i> (also in Top margin) | Suidae | A |
| 3589a | 6000le | Chacma Baboon, <i>Papio ursinus</i> | Cercopithecidae | A |
| 3289b | 6000le | Chimpanzee, <i>Pan troglodytes</i> | Hominidae | A |
| 3289c | 6000le | South American Squirrel Monkey, <i>Saimiri sciureus</i> | Cebidae | A |
| 3289d | 6000le | Stump-tailed Macaque, <i>Macaca arctoides</i> | Cercopithecidae | A |
| 3289 | Margin | L: Ring-tailed Lemur, <i>Lemur catta</i> | Lemuridae | Z |
| 3609 | SS 24000le | Bornean Orangutan, <i>Pongo pygmaeus</i> | Hominidae | A |
| | Margin | R: Western Gorilla, <i>Gorilla gorilla</i> | Hominidae | Z |
| 3590a | 6000le | Striped Hyena, <i>Hyaena hyaena</i> | Hyaenidae | A |
| 3590b | 6000le | Spotted Hyena, <i>Crocuta crocuta</i> | Hyaenidae | A |
| 3590c | 6000le | Brown Hyena, <i>Hyaena brunnea</i> | Hyaenidae | A |
| 3590d | 6000le | Spotted Hyena, <i>Crocuta crocuta</i> | Hyaenidae | A |
| 3590 | Margin | L: Spotted Hyena, <i>Crocuta crocuta</i> | Hyaenidae | Z |
| 3610 | SS 24000le | Striped Hyena, <i>Hyaena hyaena</i> | Hyaenidae | A |
| | Margin | R: Spotted Hyena, <i>Crocuta crocuta</i> | Hyaenidae | Z |
| 3591a | 6000le | Leopard, <i>Panthera pardus</i> (resting facing L) | Felidae | A |
| 3591b | 6000le | Same species (w/ prey in mouth) | | A |
| 3591c | 6000le | Same species (standing on branch) | | A |
| 3591d | 6000le | Same species (resting facing R) | | A |
| 3591 | Margin | L: Same species | | Z |
| 3611 | SS 24000le | Leopard, <i>Panthera pardus</i> | Felidae | A |
| | Margin | R: Same species | | Z |
| 3592a | 6000le | Lion, <i>Panthera leo</i> ♂ & ♀ | Felidae | A |
| 3592b | 6000le | Same species ♂ | | A |
| 3592c | 6000le | Same species ♀ | | A |
| 3592d | 6000le | Same species ♀ (two) | | A |
| 3592 | Margin | L: Same species ♂ | | Z |
| 3612 | SS 24000le | Lion, <i>Panthera leo</i> ♀ | Felidae | A |
| | Margin | R: Same species ♂ | | Z |
| 3593a | 6000le | African Bush Elephant, <i>Loxodonta africana</i> (adult walking) | Elephantidae | A |
| 3593b | 6000le | Same species (adult & juvenile at water hole) | | A |
| 3593c | 6000le | Same species (adult & juvenile in grass) | | A |
| 3593d | 6000le | Same species (adult in grass) | | A |
| 3593 | Margin | L: Same species | | Z |
| 3613 | SS 24000le | African Bush Elephant, <i>Loxodonta africana</i> | Elephantidae | A |
| | Margin | R: Same species | | Z |
| 3594a | 6000le | West Indian Manatee, <i>Trichechus manatus latirostris</i> | Trichechidae | A |
| 3594b | 6000le | Same species (name in black on two lines) | | A |
| 3594c | 6000le | West Indian Manatee, <i>Trichechus manatus</i> | Trichechidae | A |
| 3594d | 6000le | West Indian Manatee, <i>T. manatus latirostris</i> (name in white) | Trichechidae | A |
| 3594 | Margin | L: Same species | | Z |
| 3614 | SS 24000le | West Indian Manatee, <i>Trichechus manatus latirostris</i> | Trichechidae | A |

SIERRA LEONE (continued)

| | | | | |
|-------|------------|-----------------------------------------------------------------|-----------------|---|
| 3595a | 6000le | Common Bottlenose Dolphin, <i>Tursiops truncatus</i> (name Bot) | Delphinidae | A |
| 3595b | 6000le | Short-beaked Common Dolphin, <i>Delphinus delphis</i> | Delphinidae | A |
| 3595c | 6000le | Long-beaked Common Dolphin, <i>Delphinus capensis</i> | Delphinidae | A |
| 3595d | 6000le | Common Bottlenose Dolphin, <i>Tursiops truncatus</i> (name LR) | Delphinidae | A |
| 3595 | Margin | L: Common Bottlenose Dolphin, <i>Tursiops truncatus</i> | Delphinidae | Z |
| 3615 | SS 24000le | Long-beaked Common Dolphin, <i>Delphinus capensis</i> | Delphinidae | A |
| | Margin | R: Same species | | Z |
| 3596a | 6000le | Killer Whale, <i>Orcinus orca</i> (leaping R) | Delphinidae | A |
| 3596b | 6000le | Same species (leaping) | | A |
| 3596c | 6000le | Same species (leaping R w/ underside showing) | | A |
| 3596d | 6000le | Same species (leaping L) | | A |
| 3596 | Margin | L: Same species | | Z |
| 3616 | SS 24000le | Killer Whale, <i>Orcinus orca</i> | Delphinidae | A |
| | Margin | R: Same species | | Z |
| 3597a | 6000le | Humpback Whale, <i>Megaptera novaeangliae</i> (two) | Balaenopteridae | A |
| 3597b | 6000le | Same species (one, name in black) | | A |
| 3597c | 6000le | Same species (one, name in white) | | A |
| 3597d | 6000le | Beluga, <i>Delphinapterus leucas</i> | Monodontidae | A |
| 3597 | Margin | L: Humpback Whale, <i>Megaptera novaeangliae</i> | Balaenopteridae | Z |
| 3617 | SS 24000le | Humpback Whale, <i>Megaptera novaeangliae</i> | Balaenopteridae | A |
| | Margin | R: Same species | | Z |

SIERRA LEONE**2016 March 25** (Maritime Fauna) (5ea MS/4 & 5ea SS/1)

These sheets are part of a set of 20 MS/4 and 20 SS/1 depicting maritime subjects.

| | | | | |
|-------|------------|-----------------------------------------------------------------|----------------|---|
| 3667a | 6000le | Polar Bear, <i>Ursus maritimus</i> (walking left) | Ursidae | A |
| 3667b | 6000le | Same species (facing R) | | A |
| 3667c | 6000le | Same species (climbing facing L) | | A |
| 3667d | 6000le | Same species (facing forward) | | A |
| 3667 | Margin | LL: Same species | | Z |
| 3687 | SS 24000le | Polar Bear, <i>Ursus maritimus</i> (also in L margin) | Ursidae | A |
| 3668a | 6000le | Hippopotamus, <i>Hippopotamus amphibius</i> (two w/ mouth open) | Hippopotamidae | A |
| 3668b | 6000le | Same species (head) | | A |
| 3668c | 6000le | Same species (w/ crocodile) | | A |
| 3668d | 6000le | Same species (two w/ mouth closed) | | A |
| 3668 | Margin | LL: Same species | | Z |
| 3688 | SS 24000le | Hippopotamus, <i>Hippopotamus amphibius</i> (also in L margin) | Hippopotamidae | A |
| 3669a | 6000le | California Sea Lion, <i>Zalophus californianus</i> | Otariidae | A |
| 3669b | 6000le | Steller Sea Lion, <i>Eumetopias jubatus</i> | Otariidae | A |
| 3669c | 6000le | South American Sea Lion, <i>Otaria flavescens</i> | Otariidae | A |
| 3669d | 6000le | New Zealand Sea Lion, <i>Phocarctos hookeri</i> | Otariidae | A |
| 3669 | Margin | LL: South American Sea Lion, <i>Otaria flavescens</i> | Otariidae | Z |
| 3689 | SS 24000le | Steller Sea Lion, <i>Eumetopias jubatus</i> | Otariidae | A |
| | Margin | L: California Sea Lion, <i>Zalophus californianus</i> | Otariidae | Z |
| | | Ctr & LR: Australian Sea Lion, <i>Neophoca cinerea</i> | Otariidae | Z |
| | | Ctr: New Zealand Sea Lion, <i>Phocarctos hookeri</i> | Otariidae | Z |
| 3670a | 6000le | Dusky Dolphin, <i>Lagenorhynchus obscurus</i> | Delphinidae | A |
| 3670b | 6000le | Commerson's Dolphin, <i>Cephalorhynchus commersonii</i> | Delphinidae | A |
| 3670c | 6000le | Risso's Dolphin, <i>Grampus griseus</i> | Delphinidae | A |
| 3670d | 6000le | Common Bottlenose Dolphin, <i>Tursiops truncatus</i> | Delphinidae | A |
| 3670 | Margin | LL: Atlantic Spotted Dolphin, <i>Stenella frontalis</i> | Delphinidae | Z |

SIERRA LEONE (continued)

| | | | | |
|-------|------------|--------------------------------------------------------------------|-----------------|---|
| 3690 | SS 24000le | Heaviside's Dolphin, <i>Cephalorhynchus heavisidii</i> | Delphinidae | A |
| | Margin | UL: Indo-Pacific Hump-backed Dolphin, <i>Sousa chinensis</i> | Delphinidae | Z |
| | | Top: Atlantic Hump-backed Dolphin, <i>Sousa teuszii</i> | Delphinidae | Z |
| | | ML: Pacific White-sided Dolphin, <i>Lagenorhynchus obliquidens</i> | Delphinidae | Z |
| | | LR: Southern Right Whale, <i>Eubalaena australis</i> | Balaenidae | Z |
| 3671a | 6000le | Fin Whale, <i>Balaenoptera physalus</i> | Balaenopteridae | A |
| 3671b | 6000le | Sperm Whale, <i>Physeter catodon</i> | Physeteridae | A |
| 3671c | 6000le | Humpback Whale, <i>Megaptera novaeangliae</i> | Balaenopteridae | A |
| 3671d | 6000le | Beluga, <i>Delphinapterus leucas</i> | Monodontidae | A |
| 3671 | Margin | LL: Humpback Whale, <i>Megaptera novaeangliae</i> | Balaenopteridae | Z |
| 3691 | SS 24000le | Bowhead Whale, <i>Balaena mysticetus</i> | Balaenidae | A |
| | Margin | L: Humpback Whale, <i>Megaptera novaeangliae</i> | Balaenopteridae | Z |
| | | LR: Sperm Whale, <i>Physeter catodon</i> | Physeteridae | Z |

2016 May 9 (Various Subjects) (Set/17)

| | | | | |
|------|-------|----------------------------------------------|---------|---|
| 3749 | 500le | Lion, <i>Panthera leo</i> (dull green denom) | Felidae | A |
| 3750 | 500le | Lion, <i>Panthera leo</i> (dark red denom) | Felidae | A |

2016 May 27 (Wildlife of African National Parks & Reserves)

This set of 19 MS/4 and 19 SS/1 depict wildlife on sheets shaped like the African continent with maps of the parks.

| | | | | |
|-------|------------|-----------------------------------------------------------|-----------------|---|
| 3764a | 6000le | Common Warthog, <i>Phacochoerus africanus</i> | Suidae | A |
| 3764b | 6000le | Lion, <i>Panthera leo</i> | Felidae | A |
| 3764c | 6000le | Greater Kudu, <i>Tragelaphus strepsiceros</i> | Bovidae | A |
| 3764d | 6000le | Giraffe, <i>Giraffa camelopardalis</i> | Giraffidae | A |
| 3764 | | MS/4 (Sc#3764a-d) Central Kalahari Game Reserve, Botswana | | |
| 3783 | SS 24000le | Brown Hyena, <i>Hyaena brunnea</i> | Hyaenidae | A |
| | Margin | LL: Blue Wildebeest, <i>Connochaetes taurinus</i> | Bovidae | Z |
| | | LR: Greater Kudu, <i>Tragelaphus strepsiceros</i> | Bovidae | Z |
| 3765a | 6000le | African Bush Elephant, <i>Loxodonta africana</i> | Elephantidae | A |
| 3765b | 6000le | Greater Kudu, <i>Tragelaphus strepsiceros</i> | Bovidae | A |
| 3765c | 6000le | Desert Warthog, <i>Phacochoerus aethiopicus</i> | Suidae | A |
| 3765 | | MS/4 (Sc#3765a-d) Chobe National Park, Botswana | | |
| 3784 | SS 24000le | Banded Mongoose, <i>Mungos mungo</i> | Herpestidae | A |
| | Margin | UR: Hippopotamus, <i>Hippopotamus amphibius</i> | Hippopotamidae | Z |
| | | LR: Banded Mongoose, <i>Mungos mungo</i> | Herpestidae | Z |
| 3766a | 6000le | Aardvark, <i>Orycteropus afer</i> | Orycteropodidae | A |
| 3766b | 6000le | Lion, <i>Panthera leo bleyenberghi</i> | Felidae | A |
| 3766c | 6000le | African Buffalo, <i>Syncerus caffer</i> | Bovidae | A |
| 3766d | 6000le | Impala, <i>Aepyceros melampus</i> | Bovidae | A |
| 3766 | | MS/4 (Sc#3766a-d) Moremi Game Reserve, Botswana | | |
| 3785 | SS 24000le | Meerkat, <i>Suricata suricatta</i> | Herpestidae | A |
| | Margin | R: African Wild Dog, <i>Lycaon pictus</i> | Canidae | Z |
| | | Bot: Meerkat, <i>Suricata suricatta</i> | Herpestidae | Z |
| 3767a | 6000le | Cheetah, <i>Acinonyx jubatus</i> | Felidae | A |
| 3767b | 6000le | White Rhinoceros, <i>Ceratotherium simum</i> | Rhinocerotidae | A |
| 3767d | 6000le | Giraffe, <i>Giraffa camelopardalis tippelskirchi</i> | Giraffidae | A |
| 3767 | | MS/4 (Sc#3767a-d) Amboseli National Park, Kenya | | |
| 3786 | SS 24000le | African Bush Elephant, <i>Loxodonta africana</i> | Elephantidae | A |
| | Margin | UR & LR: Common Zebra, <i>Equus quagga</i> | Equidae | Z |
| 3768a | 6000le | Bat-eared Fox, <i>Otocyon megalotis</i> | Canidae | A |
| 3768b | 6000le | Cheetah, <i>Acinonyx jubatus</i> | Felidae | A |

SIERRA LEONE (continued)

| | | | | |
|-------|------------|----------------------------------------------------------------------|-----------------|---------|
| 3768c | 6000le | Black Rhinoceros, <i>Diceros bicornis</i> | Rhinocerotidae | A |
| 3768d | 6000le | Common Tsessebe or Topi, <i>Damaliscus lunatus jimela</i> | Bovidae | A |
| 3768 | | MS/4 (Sc#3768a–d) Masai Mara National Reserve, Kenya | | |
| 3787 | SS 24000le | Nile Crocodile on stamp | | |
| | Margin | LR: African Bush Elephant, <i>Loxodonta africana</i> | Elephantidae | Z |
| 3769b | 6000le | Black-backed Jackal, <i>Canis mesomelas</i> | Canidae | A |
| 3769c | 6000le | White Rhinoceros, <i>Ceratotherium simum</i> | Rhinocerotidae | A |
| 3769d | 6000le | Springbok, <i>Antidorcas marsupialis</i> | Bovidae | A |
| 3769 | | MS/4 (Sc#3769a–d) Etosha National Park, Namibia | | |
| 3788 | SS 24000le | Flamingo on stamp | | |
| | Margin | MR: White Rhinoceros, <i>Ceratotherium simum</i> | Rhinocerotidae | Z |
| | | LR: Slender Mongoose, <i>Galerella sanguinea</i> | Herpestidae | Z |
| 3770a | 6000le | Meerkat, <i>Suricata suricatta</i> | Herpestidae | A |
| 3770c | 6000le | Eland, <i>Taurotragus oryx</i> | Bovidae | A |
| 3770 | | MS/4 (Sc#3770a–d) Mudumu National Park, Namibia | | |
| 3789 | SS 24000le | African Buffalo, <i>Syncerus caffer</i> | Bovidae | A |
| 3771b | 6000le | Jentink's Duiker, <i>Cephalophus jentinki</i> | Bovidae | A |
| 3771d | 6000le | Sooty Mangabey, <i>Cercocebus atys</i> | Cercopithecidae | A |
| 3771 | | MS/4 (Sc#3771a–d) Gola Rainforest National Park, Sierra Leone | | |
| 3790 | SS 24000le | Frog on stamp | | |
| | Margin | R: Diana Monkey, <i>Cercopithecus diana</i> | Cercopithecidae | Z |
| 3772b | 6000le | Chimpanzee, <i>Pan troglodytes</i> | Hominidae | A |
| 3772c | 6000le | Bongo, <i>Tragelaphus eurycerus</i> | Bovidae | A |
| 3772d | 6000le | Common Warthog, <i>Phacochoerus africanus</i> | Suidae | A |
| 3772 | | MS/4 (Sc#3772a–d) Outamba-Kulimi National Park, Sierra Leone | | |
| 3791 | SS 24000le | Western Red Colobus, <i>Piliocolobus badius</i> | Cercopithecidae | A |
| | Margin | Bongo, <i>Tragelaphus eurycerus</i> | Bovidae | Z |
| 3773a | 6000le | Chimpanzee, <i>Pan troglodytes</i> | Hominidae | A |
| 3773b | 6000le | Zebra Duiker, <i>Cephalophus zebra</i> | Bovidae | A |
| 3773c | 6000le | African Manatee, <i>Trichechus senegalensis</i> | Trichechidae | A |
| 3773d | 6000le | Western Red Colobus, <i>Piliocolobus badius</i> | Cercopithecidae | A |
| 3773 | | MS/4 (Sc#3773a–d) Western Area Peninsula National Park, Sierra Leone | | |
| 3792 | SS 24000le | Bald Crow on stamp | | |
| | Margin | Western Red Colobus, <i>Piliocolobus badius</i> | Cercopithecidae | Z |
| 3774a | 6000le | Cheetah, <i>Acinonyx jubatus jubatus</i> | Felidae | A |
| 3774b | 6000le | Burchell's Zebra, <i>Equus quagga burchellii</i> | Equidae | A |
| 3774c | 6000le | Black Rhinoceros, <i>Diceros bicornis</i> | Rhinocerotidae | A |
| 3774d | 6000le | African Bush Elephant, <i>Loxodonta africana</i> | Elephantidae | A |
| 3774 | | MS/4 (Sc#3774a–d) Kruger National Park, South Africa | | |
| 3793 | SS 24000le | Lion, <i>Panthera leo</i> | Felidae | A |
| | Margin | LR: Leopard, <i>Panthera pardus pardus</i> | Felidae | Z |
| 3775a | 6000le | Cape Hare, <i>Lepus capensis</i> | Leporidae | A |
| 3775c | 6000le | Small-eared Galago, <i>Otolemur garnettii</i> | Galagidae | (new) A |
| 3775d | 6000le | Bat-eared Fox, <i>Otocyon megalotis</i> | Canidae | A |
| 3775 | | MS/4 (Sc#3775a–d) Ruaha National Park, Tanzania | | |
| 3794 | SS 24000le | Stamp and margin depict only birds | | |
| 3776c | 6000le | East African Lion, <i>Panthera leo nubica</i> | Felidae | A |
| 3776d | 6000le | Hippopotamus, <i>Hippopotamus amphibius</i> | Hippopotamidae | A |
| 3776 | | MS/4 (Sc#3776a–d) Selous Game Reserve, Tanzania | | |

SIERRA LEONE (continued)

| | | | | |
|-------|------------|---------------------------------------------------------------|-----------------|---------|
| 3795 | SS 24000le | Spoonbill on stamp | | |
| | Margin | MR: Giraffe, <i>Giraffa camelopardalis</i> | Giraffidae | Z |
| | | Bot: Sable Antelope, <i>Hippotragus niger</i> | Bovidae | Z |
| 3777a | 6000le | Impala, <i>Aepyceros melampus</i> | Bovidae | A |
| 3777b | 6000le | Large-spotted Genet, <i>Genetta tigrina</i> | Viverridae | A |
| 3777 | | MS/4 (Sc#3777a–d) Serengeti National Park, Tanzania | | |
| 3796 | SS 24000le | Leopard, <i>Panthera pardus</i> | Felidae | A |
| 3778b | 6000le | Eastern Gorilla, <i>Gorilla beringei beringei</i> | Hominidae | A |
| 3778d | 6000le | Mantled Guereza, <i>Colobus guereza</i> | Cercopithecidae | A |
| 3778 | | MS/4 (Sc#3778a–d) Bwindi Impenetrable National Park, Uganda | | |
| 3797 | SS 24000le | Emerald Cuckoo on stamp | | |
| | Margin | Eastern Gorilla, <i>Gorilla beringei beringei</i> | Hominidae | Z |
| 3779a | 6000le | Cape Bushbuck, <i>Tragelaphus sylvaticus</i> | Bovidae | (new) A |
| 3779b | 6000le | Burchell's Zebra, <i>Equus quagga burchellii</i> | Equidae | A |
| 3779c | 6000le | African Buffalo, <i>Syncerus caffer</i> | Bovidae | A |
| 3779d | 6000le | Waterbuck, <i>Kobus ellipsiprymnus</i> | Bovidae | A |
| 3779 | | MS/4 (Sc#3779a–d) Kidepo Valley National Park, Uganda | | |
| 3798 | SS 24000le | Bushpig, <i>Potamochoerus larvatus</i> | Suidae | A |
| | Margin | MR: Giraffe, <i>Giraffa camelopardalis</i> | Giraffidae | Z |
| | | LR: Common Warthog, <i>Phacochoerus africanus</i> | Suidae | Z |
| 3780a | 6000le | Eland, <i>Taurotragus oryx</i> | Bovidae | A |
| 3780b | 6000le | Puku, <i>Kobus vardonii</i> | Bovidae | A |
| 3780c | 6000le | African Wild Dog, <i>Lycaon pictus</i> | Canidae | A |
| 3780d | 6000le | Red Lechwe, <i>Kobus leche</i> | Bovidae | A |
| 3780 | | MS/4 (Sc#3780a–d) Kafue National Park, Zambia | | |
| 3799 | SS 24000le | Cape Bushbuck, <i>Tragelaphus sylvaticus</i> | Bovidae | A |
| | Margin | R: Caracal, <i>Caracal caracal</i> | Felidae | Z |
| 3781a | 6000le | Rhodesian Giraffe, <i>Giraffa camelopardalis thornicrofti</i> | Giraffidae | A |
| 3781b | 6000le | Crawshay's Zebra, <i>Equus quagga crawshayi</i> | Equidae | A |
| 3781c | 6000le | Hippopotamus, <i>Hippopotamus amphibius</i> | Hippopotamidae | A |
| 3781 | | MS/4 (Sc#3781a–d) South Luangwa National Park, Zambia | | |
| 3800 | SS 24000le | African Savannah Hare, <i>Lepus microtis</i> | Leporidae | (new) A |
| | Margin | R: Ground Pangolin, <i>Manis temminckii</i> | Manidae | Z |
| 3782a | 6000le | Ground Pangolin, <i>Manis temminckii</i> | Manidae | A |
| 3782b | 6000le | African Clawless Otter, <i>Aonyx capensis</i> | Mustelidae | A |
| 3782d | 6000le | Crested Porcupine, <i>Hystrix cristata</i> | Hystriidae | A |
| 3782 | | MS/4 (Sc#3782a–d) Mana Pools National Park, Zimbabwe | | |
| 3801 | SS 24000le | Honey Badger, <i>Mellivora capensis</i> | Mustelidae | A |

2016 August 29 (Fauna, Flora & Christmas) (7ea MS/4 & 7ea SS/1)

These sheets are part of a set of 20 MS/4 and 20 SS/1 depicting mainly fauna and flora.

| | | | | |
|-------|------------|-------------------------------------------------------------|----------|---|
| 3884a | 6000le | Giant Panda, <i>Ailuropoda melanoleuca</i> (near rocks) | Ursidae | A |
| 3884b | 6000le | Same species (head eating) | | A |
| 3884c | 6000le | Same species (seated eating) | | A |
| 3884d | 6000le | Same species (walking) | | A |
| 3904 | SS 24000le | Giant Panda, <i>Ailuropoda melanoleuca</i> (also in margin) | Ursidae | A |
| 3885a | 6000le | Harp Seal, <i>Pagophilus groenlandicus</i> | Phocidae | A |
| 3885b | 6000le | Southern Elephant Seal, <i>Mirounga leonina</i> | Phocidae | A |
| 3885c | 6000le | Weddell Seal, <i>Leptonychotes weddellii</i> | Phocidae | A |
| 3885d | 6000le | Leopard Seal, <i>Hydrurga leptonyx</i> | Phocidae | A |

SIERRA LEONE (continued)

| | | | | |
|---------------------------------------------------------------------------|------------|----------------------------------------------------------------|------------------|---|
| 3905 | SS 24000le | Harbor Seal, <i>Phoca vitulina</i> | Phocidae | A |
| | Margin | Bot: Crabeater Seal, <i>Lobodon carcinophagus</i> | Phocidae | Z |
| | | UL: Weddell Seal, <i>Leptonychotes weddellii</i> | Phocidae | Z |
| | | UR: Southern Elephant Seal, <i>Mirounga leonina</i> | Phocidae | Z |
| 3886a | 6000le | Indian Flying Fox, <i>Pteropus giganteus</i> | Pteropodidae | A |
| 3886b | 6000le | Common Noctule, <i>Nyctalus noctula</i> | Vespertilionidae | A |
| 3886c | 6000le | Gambian Epauletted Fruit Bat, <i>Epomophorus gambianus</i> | Pteropodidae | A |
| 3886d | 6000le | Common Pipistrelle, <i>Pipistrellus pipistrellus</i> | Vespertilionidae | A |
| 3906 | SS 24000le | Greater Horseshoe Bat, <i>Rhinolophus ferrumequinum</i> | Rhinolophidae | A |
| | Margin | UL: Common Noctule, <i>Nyctalus noctula</i> | Vespertilionidae | Z |
| | | UR: Indian Flying Fox, <i>Pteropus giganteus</i> | Pteropodidae | Z |
| | | Bot: Desert Long-eared Bat, <i>Otonycteris hemprichii</i> | Vespertilionidae | Z |
| 3887a | 6000le | Malayan Tiger, <i>Panthera tigris jacksoni</i> | Felidae | A |
| 3887b | 6000le | Siberian Tiger, <i>Panthera tigris altaica</i> | Felidae | A |
| 3887c | 6000le | Tiger, <i>Panthera tigris</i> (facing R) | Felidae | A |
| 3887d | 6000le | Tiger, <i>Panthera tigris</i> (facing L) | Felidae | A |
| 3907 | SS 24000le | Tiger, <i>Panthera tigris sumatrae</i> | Felidae | A |
| | Margin | UL: Malayan Tiger, <i>Panthera tigris jacksoni</i> | Felidae | Z |
| | | UR: Tiger, <i>Panthera tigris</i> | Felidae | Z |
| | | Bot: Indochinese Tiger, <i>Panthera tigris corbetti</i> | Felidae | Z |
| 3888a | 6000le | Snow Leopard, <i>Panthera uncia</i> (on ledge facing R) | Felidae | A |
| 3888b | 6000le | Same species (running L) | | A |
| 3888c | 6000le | Same species (on rocks leaping) | | A |
| 3888d | 6000le | Same species (two) | | A |
| 3908 | SS 24000le | Snow Leopard, <i>Panthera uncia</i> (also on margin) | Felidae | A |
| 3889a | 6000le | Puma, <i>Puma concolor</i> | Felidae | A |
| 3889b | 6000le | Clouded Leopard, <i>Neofelis nebulosa</i> | Felidae | A |
| 3889c | 6000le | Cheetah, <i>Acinonyx jubatus</i> | Felidae | A |
| 3889d | 6000le | Lion, <i>Panthera leo</i> | Felidae | A |
| 3909 | SS 24000le | Jaguar, <i>Panthera onca</i> | Felidae | A |
| | Margin | UL: Lion, <i>Panthera leo</i> | Felidae | Z |
| | | UR: Puma, <i>Puma concolor</i> | Felidae | Z |
| | | Bot: Tiger, <i>Panthera tigris</i> | Felidae | Z |
| 3890a | 6000le | Spinner Dolphin, <i>Stenella longirostris</i> | Delphinidae | A |
| 3890b | 6000le | Atlantic Humpbacked Dolphin, <i>Sousa teuszii</i> | Delphinidae | A |
| 3890c | 6000le | Amazon River Dolphin, <i>Inia geoffrensis</i> | Iniidae | A |
| 3890d | 6000le | Short-beaked Common Dolphin, <i>Delphinus delphis</i> | Delphinidae | A |
| 3910 | SS 24000le | Common Bottlenose Dolphin, <i>Tursiops truncatus</i> | Delphinidae | A |
| | Margin | UL: Spinner Dolphin, <i>Stenella longirostris</i> | Delphinidae | Z |
| | | UR: Short-beaked Common Dolphin, <i>Delphinus delphis</i> | Delphinidae | Z |
| | | Bot: Common Bottlenose Dolphin, <i>Tursiops truncatus</i> | Delphinidae | Z |
| 2016 September 29 (China 2016 Intl Stamp Exhibition) (MS/4 & SS/1) | | | | |
| 3962a | 6000le | Giant Panda, <i>Ailuropoda melanoleuca</i> (standing facing R) | Ursidae | A |
| 3962b | 6000le | Same species (standing facing forward) | | A |
| 3962c | 6000le | Same species (reclining) | | A |
| 3962d | 6000le | Same species (sitting) | | A |
| 3963 | SS 24000le | Giant Panda, <i>Ailuropoda melanoleuca</i> (round stamp) | Ursidae | A |
| | Margin | Bot: Same species | | Z |

SIERRA LEONE (continued)**2016 October 28** (New Year: Year of Monkey) (MS/4 & SS/1)

| | | | | |
|-------|------------|----------------------------------------------------------|-----------------|---|
| 4000a | 6000le | Golden Snub-nosed Monkey, <i>Rhinopithecus roxellana</i> | Cercopithecidae | A |
| 4000b | 6000le | Same species (head) | | A |
| 4000c | 6000le | Same species (two animals) | | A |
| 4000d | 6000le | Same species (three animals) | | A |
| 4000 | Margin | L: Same species | | Z |
| 4001 | SS 24000le | Golden Snub-nosed Monkey, <i>Rhinopithecus roxellana</i> | Cercopithecidae | A |
| | Margin | L: Same species | | Z |

2016 December 29 (Primates) (Set/4 & SS/1)

| | | | | |
|------|------------|---------------------------------------------------------------|-------------|---------|
| 4044 | 6000le | Western Gorilla, <i>Gorilla gorilla gorilla</i> (one animal) | Hominidae | A |
| 4045 | 6000le | Western Gorilla, <i>Gorilla gorilla gorilla</i> (two animals) | Hominidae | A |
| 4046 | 6000le | Chimpanzee, <i>Pan troglodytes</i> | Hominidae | A |
| 4047 | 6000le | Muller's Bornean Gibbon, <i>Hylobates muelleri muelleri</i> | Hylobatidae | (new) A |
| 4048 | SS 24000le | Sumatran Orangutan, <i>Pongo abelii</i> | Hominidae | A |

2016 December 29 (Fauna & Flora) (5ea MS/4 & 5ea SS/1)

These sheets are part of a set of 19 MS/4 and 19 SS/1 depicting mainly fauna and flora.

| | | | | |
|-------|------------|---------------------------------------------------------------------------|-----------------|---|
| 4049a | 6000le | Polar Bear, <i>Ursus maritimus</i> (facing forward) | Ursidae | A |
| 4049b | 6000le | Same species (adult & cubs) | | A |
| 4049c | 6000le | Same species (two walking) | | A |
| 4049d | 6000le | Same species (facing L) | | A |
| 4068 | SS 24000le | Polar Bear, <i>Ursus maritimus</i> (also on R & Bot margin) | Ursidae | A |
| 4050a | 6000le | Eastern Gorilla, <i>Gorilla beringei beringei</i> (adult & juvenile at R) | Hominidae | A |
| 4050b | 6000le | Western Gorilla, <i>Gorilla gorilla</i> | Hominidae | A |
| 4050c | 6000le | Eastern Gorilla, <i>Gorilla beringei beringei</i> (on tree) | Hominidae | A |
| 4050d | 6000le | Eastern Gorilla, <i>Gorilla beringei beringei</i> (adult & juvenile at L) | Hominidae | A |
| 4069 | SS 24000le | Eastern Gorilla, <i>Gorilla beringei graueri</i> | Hominidae | A |
| | Margin | UR: Western Gorilla, <i>Gorilla gorilla</i> | Hominidae | Z |
| | | Bot: Eastern Gorilla, <i>Gorilla beringei</i> | Hominidae | Z |
| 4053a | 6000le | Dugong, <i>Dugong dugon</i> (two, front animal facing L) | Dugongidae | A |
| 4053b | 6000le | Same species (two, front animal facing forward) | | A |
| 4053c | 6000le | Same species (two, front animal facing R) | | A |
| 4053d | 6000le | Same species (w/ fish) | | A |
| 4072 | SS 24000le | Dugong, <i>Dugong dugon</i> (also in R & Bot margin) | Dugongidae | A |
| 4054a | 6000le | Blue Whale, <i>Balaenoptera musculus</i> | Balaenopteridae | A |
| 4054b | 6000le | Grey Whale, <i>Eschrichtius robustus</i> | Eschrichtiidae | A |
| 4054c | 6000le | Sperm Whale, <i>Physeter catodon</i> | Physeteridae | A |
| 4054d | 6000le | Fin Whale, <i>Balaenoptera physalus</i> | Balaenopteridae | A |
| 4073 | SS 24000le | Humpback Whale, <i>Megaptera novaeangliae</i> (Cap: <i>B. musculus</i>) | Balaenopteridae | A |
| | Margin | UR: Sperm Whale, <i>Physeter catodon</i> | Physeteridae | Z |
| | | Bot: Common Minke Whale, <i>Balaenoptera acutorostrata</i> | Balaenopteridae | Z |
| 4064c | 6000le | Golden Snub-nosed Monkey, <i>Rhinopithecus roxellana</i> | Cercopithecidae | A |
| 4064d | 6000le | Asiatic Elephant, <i>Elephas maximus</i> | Elephantidae | A |
| 4083 | SS 24000le | Chinese Pangolin, <i>Manis pentadactyla</i> | Manidae | A |
| | Margin | R: Golden Snub-nosed Monkey, <i>Rhinopithecus roxellana</i> | Cercopithecidae | Z |

URUGUAY**2016 November 16** (Rio Negro Department Tourism) (Set/2)

| | | | | |
|------|-----|-----------------------------------------|---------|---------|
| 2574 | 20p | Crab-eating Fox, <i>Cerdocyon thous</i> | Canidae | (new) A |
|------|-----|-----------------------------------------|---------|---------|



ORNITHOLOGY

Editor

Glenn G. Mertz, BU1455

Corrections/Updates



TANZANIA -- Vol. 66(3), p.135

Correction: Sc#2772a was listed as a Lesser Masked-Weaver, *Ploceus intermedius*. This species is a Black-headed Weaver, *Ploceus melanocephalus*.

New Issues

| Scott# | Denom | Common Name/Scientific Name | Family/Subfamily | Code |
|----------------------------------------------------------------------------|---------|---------------------------------------------------------------------------------|------------------|------|
| ALBANIA | | | | |
| 2016 October 13 [85th anniv. writer Dritero Agolli (1937–2017)] | | | | |
| 2994 | 120L | Bald Eagle, <i>Haliaeetus leucocephalus</i> | Accipitridae | C |
| ARGENTINA | | | | |
| 2016 September 19 (100th anniv. Aves) (MS/4) | | | | |
| 2806a | 11p | Blue-tufted Starthroat, <i>Heliomaster furcifer</i> | Trochilidae | A |
| 2806b | 11p | Gilded Hummingbird, <i>Hylocharis chrysurus</i> | Trochilidae | |
| 2806c | 11p | Red-tailed Comet, <i>Sappho sparganurus</i> | Trochilidae | |
| 2806d | 11p | Glittering-bellied Emerald, <i>Chlorostilbon lucidus</i> | Trochilidae | |
| ARMENIA | | | | |
| 2016 December 29 (Birds) (Set/2) | | | | |
| 1092 | 230d | Egyptian Vulture, <i>Neophron percnopterus</i> | Accipitridae | A |
| 1093 | 280d | Eurasian Kestrel, <i>Falco tinnunculus</i> (Cap: "Bird of the Year" on left) | Falconidae | |
| BELARUS | | | | |
| 2017 March 22 (Birdlife) (Single) | | | | |
| 1041 | (1.26r) | Crested Lark, <i>Galerida cristata</i> | Alaudidae | A |
| BELGIUM | | | | |
| 2017 January 30 (Registration Stamp) (Single) | | | | |
| F6 | (€5.29) | Water Rail, <i>Rallus aquaticus</i> | Rallidae | A |
| BHUTAN | | | | |
| 2016 October 18 (National Flora & Fauna) (MS/4 & 4ea SS/1) | | | | |
| 1556a | 30nu | Common Raven, <i>Corvus corax</i> (national bird) | Corvidae | A |
| 1557 | SS 60nu | Common Raven, <i>Corvus corax</i> (standing) | Corvidae | |
| 2016 December 17 (Six Elements of Longevity) (MS/6) | | | | |
| 1565e | 25nu | Black-necked Crane, <i>Grus nigricollis</i> | Gruidae | S A |
| BOSNIA & HERZEGOVINA (Serb) | | | | |
| 2016 September 14 (griffon Vulture) (MS/4) | | | | |
| 548a | 90pf | Eurasian Griffon, <i>Gyps fulvus</i> (perched on rock) | Accipitridae | A |
| 548b | 90pf | Same species (in flight at angle) | | |
| 548c | 1.70pf | Same species (in flight) | | |
| 548d | 1.70pf | Same species (perched on a tree stump) | | |
| BRITISH ANTARCTIC TERR. | | | | |
| 2016 November 13 (25th anniv. IAATO) (Set/4) | | | | |
| 515 | £1.22 | Chinstrap Penguin, <i>Pygoscelis antarctica</i> (with ship) | Spheniscidae | B |
| 2016 November 13 (25th anniv. Environ. Protection Protocol) (Set/6) | | | | |
| 517 | 66p | Emperor Penguin, <i>Aptenodytes forsteri</i> | Spheniscidae | A |

BRITISH ANTARCTIC TERR. (cont) **2016 November 13** (Gentoo Penguin) (Set/6 & Coil Strip/5) **A**
Set/6 is perf 13½×13¾ or 13¾×13½ with country name in blue and inscribed "Airmail Letter." The coil strip is die cut 13½ and s/a with country name in violet and inscribed "Airmail Postcard."

| | | | |
|------|-------|-----------------------------------------------------------|--------------|
| C33 | (76p) | Gentoo Penguin, <i>Pygoscelis papua</i> (head, beak open) | Spheniscidae |
| C34 | (76p) | Same species (with egg) | |
| C35 | (76p) | Same species (chick, head only) | |
| C36 | (76p) | Same species (adult w/ two chicks) | |
| C37 | (76p) | Same species (chick) | |
| C38 | (76p) | Same species (adult) | |
| C39 | (66p) | Gentoo Penguin, <i>Pygoscelis papua</i> (like C34) | Spheniscidae |
| C40 | (66p) | Same species (like C35) | |
| C41 | (66p) | Same species (like C36) | |
| C42 | (66p) | Same species (like C37) | |
| C43 | (66p) | Same species (like C38) | |
| C43a | | Coil strip/5 (Sc#C39–C43) (s/a) | |

CARIBBEAN NETHERLANDS **2017 March 3** (Lighthouses–Personalized) (Set/4) **C**
74 99c American Flamingo, *Phoenicopterus ruber* (tiny–in flight) Phoenicopteridae

CHINA (Taiwan) **2017 May 10** (Chinese Idiom Stories) (Set/4) **C**
4353 \$5 Canada Goose, *Branta canadensis* (tiny) Anatidae

CHINA (People's Republic) **2016 August 9** (Bird) (Single) **A**
4390 \$1.20 Red-billed Leiothrix, *Leiothrix lutea* Leiothrichidae

CURAÇAO **2017 February 28** (New Year: Year of the Rooster) (Set/3 & SS/3) **A**
298 66c Red Junglefowl, *Gallus gallus* (head w/ yellow feathers) Phasianidae
299 121c Same species (head w/ brown feathers)
300 179c Same species (head w/ black feathers)
301a SS 500c Red Junglefowl, *Gallus gallus* (head facing right) Phasianidae
301b SS 500c Same species (entire bird)
301c SS 500c Same species (head facing left)

DJIBOUTI **2016 May 5** (Lighthouses) (SS/1) **B**
961 SS 960fr Sooty Tern, *Onychoprion fuscatus* (Cape Hatteras) Laridae

2016 July 28 (Intl Year of Pulses) (MS/4) **B**
995d 260fr Rosy-faced Lovebird, *Agapornis roseicollis* Psittaculidae
(Cap: *Poicephalus senegalus*)

FALKLAND ISLANDS **2017 August 14** (Birds) (Set/12 & Bklt/10) **A**
1188 1p Blackish Cinclodes, *Cinclodes antarcticus* (Cap: Tussacbird) Furnariidae
1189 2p Long-tailed Meadowlark, *Sturnella loyca* Icteridae
1190 5p Black-chinned Siskin, *Spinus barbatus* Fringillidae
1191 10p Correndera Pipit, *Anthus correndera* (Cap: Falkland Pipit) Motacillidae
1192 20p Cobb's Wren, *Troglodytes cobbi* Troglodytidae
1193 50p White-bridled Finch, *Melanodera melanodera* Thraupidae
1194 76p Austral Thrush, *Turdus falcklandii* (Cap: Falkland Thrush) Turdidae
1195 £1 Two-banded Plover, *Charadrius falklandicus* Charadriidae
1196 £1.20 Sedge Wren, *Cistothorus platensis* (Cap: Falkland Grass Wren) Troglodytidae
1197 £2 Dark-faced Ground Tyrant, *Muscisaxicola maclovianus* Tyrannidae
1198 £3.50 Rufous-chested Dotterel, *Charadrius modestus* Charadriidae
1199 £5 South American Snipe, *Gallinago paraguayiae* Scolopacidae
1200 (31p) Correndera Pipit, *Anthus correndera* (Cap: Falkland Pipit) Motacillidae
1200a Bklt/10 (Sc#1200)

| | | | | |
|---------------------------------------------------------------------------------------------------------------|--------|------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|------------|
| FR. SOUTHERN & ANTARCTIC TERR. | | | 2017 January 2 (White Tern) (MS/4) | A |
| 566a | 85c | White Tern, <i>Gygis alba</i> (two terns) | Laridae | |
| 566b | 85c | Same species (chick facing right) | | |
| 566c | 85c | Same species (head facing forward) | | |
| 566d | 85c | Same species (head facing left) | | |
| 566 | Margin | Ctr: Same species (in flight) | | |
| FRENCH POLYNESIA | | | 2016 December 9 (Birds) (Set/2 & SS/2) | A |
| 1178 | 80fr | Striated Heron, <i>Butorides striata</i> | Ardeidae | |
| 1179 | 100fr | Southern Marquesan Reed-Warbler, <i>Acrocephalus mendanae</i> | Acrocephalidae | Vol. 66(1) |
| | | | 2017 January 27 (New Year: Year of the Rooster) (Single) | A |
| 1182 | 140f | Red Junglefowl, <i>Gallus gallus</i> | Phasianidae | |
| GEORGIA | | | 2016 October 24 (Fauna) (Set/3) | A |
| 522 | 10t | Bearded Reedling, <i>Panurus biarmicus</i> | Panuridae | |
| 523 | 15t | Moussier's Redstart, <i>Phoenicurus moussieri</i> (Cap: <i>Phoenicurus erythrogastrus</i>) | Muscicapidae | |
| GREENLAND | | | 2017 May 17 (Banknote Illustrations) (Set/2 & 2ea SS/1) | S A |
| 757 | 20k | Common Eider, <i>Somateria mollissima</i> | Anatidae | |
| 757a | | SS/1 (Sc#757) | | |
| MARSHALL ISLANDS | | | 2015 March 10 (Canoes Type of 1997) (MS/4) | B |
| 1111b | 49c | Red-footed Booby, <i>Sula sula</i> | Sulidae | |
| | | | 2015 March 18 (Ships Type of 1999) (Horiz strip/4) | B |
| 1112b | 49c | Great Frigatebird, <i>Fregata minor</i> | Fregatidae | |
| | | | 2015 November 5 (Legends) (Block/8) | A |
| 1129b | 49c | Wandering Albatross, <i>Diomedea exulans</i> | Diomedidae | |
| | | | 2016 April 4 (State Seals) (MS/10) | C |
| 1134b | 49c | Bald Eagle, <i>Haliaeetus leucocephalus</i> (Pennsylvania) | Accipitridae | |
| | | | 2016 May 12 (State Seals) (MS/10) | C |
| 1135a | 49c | Bald Eagle, <i>Haliaeetus leucocephalus</i> (New York) | Accipitridae | |
| 1135h | 49c | American White Pelican, <i>Pelecanus erythrorhynchos</i> (Louisiana) | Pelecanidae | |
| 1135j | 49c | Bald Eagle, <i>Haliaeetus leucocephalus</i> (Mississippi) | Accipitridae | |
| | | | 2016 May 25 (State Seals) (MS/10) | C |
| 1136a | 49c | Bald Eagle, <i>Haliaeetus leucocephalus</i> (Illinois) | Accipitridae | |
| | | | 2016 July 20 (Howard Koslow Paintings) (MS/20) | B |
| I listed this issue in Vol. 66(1), p. 44, but I missed listing one stamp, so I am relisting the entire issue. | | | | |
| 1141c | 49c | Bald Eagle, <i>Haliaeetus leucocephalus</i> (Astronaut patch emblem) | Accipitridae | |
| 1141d | 49c | Bald Eagle, <i>Haliaeetus leucocephalus</i> | Accipitridae | |
| | | | 2016 December 15 (US National Park Service Centenary) (MS/10) | B |
| 1148f | 49c | Great Blue Heron, <i>Ardea herodias</i> (Everglades) | Ardeidae | |
| PERU | | | 2017 January 10 (Prehistoric Bird) (Single) | A |
| 1903 | 10s | <i>Pelagornis</i> sp. | †Pelagornithidae | |
| S. GEORGIA & S. SANDWICH IS. | | | 2017 June 25 (Albatross Conservation) (Set/4 & SS/4) | A |
| 564 | 70p | Black-browed Albatross, <i>Thalassarche melanophris</i> | Diomedidae | |
| 565 | 80p | Light-mantled Albatross, <i>Phoebastria palpebrata</i> | Diomedidae | |
| 566 | £1.05 | Gray-headed Albatross, <i>Thalassarche chrysostoma</i> | Diomedidae | |
| 567 | £1.25 | Wandering Albatross, <i>Diomedea exulans</i> | Diomedidae | |

S. GEORGIA & S. SANDWICH IS. (continued)

| | | | | | |
|------------------------------------|------|------------------------------------------------------------|--------------------------------------------|---------------|----------|
| 567a | | SS/4 (Sc#564–67) | | | |
| | | | 2017 August 15 (Landscapes) (Set/4) | | A |
| 568 | 70p | King Penguin, <i>Aptenodytes patagonicus</i> (Mount Paget) | | Spheniscidae | |
| | | | 2017 March 30 (Birds) (Set/9) | | A |
| UZBEKISTAN | | | | | |
| 818 | 100s | Common Crane, <i>Grus grus</i> (magenta) | | Gruidae | |
| 819 | 200s | Common Quail, <i>Coturnix coturnix</i> (blue) | | Phasianidae | |
| 820 | 250s | White Stork, <i>Ciconia ciconia</i> (blue) | | Ciconiidae | |
| 821 | 300s | Rock Pigeon, <i>Columba livia</i> (blue) | | Columbidae | |
| 822 | 350s | Thrush Nightingale, <i>Luscinia luscinia</i> (blue) | | Muscicapidae | |
| 823 | 400s | Eurasian Magpie, <i>Pica pica</i> (magenta) | | Corvidae | |
| 824 | 500s | Mute Swan, <i>Cygnus olor</i> (magenta) | | Anatidae | |
| 825 | 600s | Rock Pigeon, <i>Columba livia</i> (magenta) | | Columbidae | |
| 826 | 700s | Thrush Nightingale, <i>Luscinia luscinia</i> (magenta) | | Muscicapidae | |
| WALLIS & FUTUNA ISLANDS | | | 2016 November 30 (Birds) (SS/3) | | A |
| 780a | 95fr | Lesser Frigatebird, <i>Fregata ariel</i> | | Fregatidae | |
| 780b | 95fr | Crimson-crowned Fruit-Dove, <i>Ptilinopus porphyraceus</i> | | Columbidae | |
| 780c | 95fr | Red-tailed Tropicbird, <i>Phaethon rubricauda</i> | | Phaethontidae | |

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NEW BIRDS IN THE PHILATELIC AVIARY

Charles E. Braun, BU1364

Corrections

Several “New Birds” have turned out to be “old birds.” One of the Pakistan postal stationery issue is labeled Rufous-tailed Lark (*Ammomanes phoenicura*), but shows a Rufous-tailed Scrub-Robin (*Cercotrichas galactotes*).

A Solomon Islands issue is labeled Red-breasted Pygmy-Parrot (*Micropsitta bruijini*), but shows a Red-necked Parrot (*Amazona arausiaca*).

Four birds-of-prey in the Papua New Guinea Rare Birds issue are mislabeled. The Slaty-backed Goshawk (*Accipiter luteoschistaceus*) is probably a Eurasian Sparrowhawk (*Accipiter nisus*). Black Honey-Buzzard (*Henicopernis infuscatus*) is an Oriental Honey-Buzzard (*Pernis ptilorhynchus*). New Britain Goshawk (*Accipiter princeps*) is a Gray Goshawk (*Accipiter novaehollandiae*). The Pygmy Eagle (*Hieraetus weiskei*) is a Little Eagle (*Hieraetus morphnoides*), a “New Bird,” see below.

New Birds



HEINROTH'S SHEARWATER, *Puffinus heinrothi* Procellariidae
Solomon Islands, 2017 August 21, not yet cataloged, SS \$40

Length: 11 inches, sexes alike, probably sedentary. Brown with whitish belly and in the wings.

Habitat: Marine, presumably pelagic.

Range: Solomon Islands and New Britain.

Reference: del Hoyo, J., A. Elliott, and J. Sargatal, Eds. *Handbook of the Birds of the World, Volume 1*.



BLACK-BILLED BRUSH TURKEY, *Talegalla fuscirostris* Megapodiidae
Papua New Guinea, 2017 August 24, not yet cataloged, 1.50k

Length: 20 to 21 inches, sexes alike, resident. Black with grayish-black bare skin on the sides of the head and pale greenish-yellow legs and feet.

Habitat: Forest.

Range: Aru Island and southern New Guinea.

Reference: del Hoyo, J., A. Elliott, and J. Sargatal, Eds. *Handbook of the Birds of the World, Volume 2*.



BROWN-COLLARED BRUSH TURKEY, *Talegalla jobiensis* Megapodiidae
Papua New Guinea, 2017 August 24, not yet cataloged, 3.40k

Length: 21 to 24 inches, sexes alike, resident. Black with dark reddish bare skin on the face and neck and orange to dull red legs and feet.

Habitat: Forest.

Range: Northern New Guinea.

Reference: del Hoyo, J., A. Elliott, and J. Sargatal, Eds. *Handbook of the Birds of the World, Volume 2*.



HEN HARRIER, *Circus cyaneus* Accipitridae
Isle of Man, 1986 April 10, Sc#306b, 12p

Length: 17 to 21 inches, migratory. The male (shown) is gray above and white below with a gray breast and white rump. The female is brown above and brown-streaked white below.

Habitat: Open country with grass or shrub cover.

Range: Breeds from Europe to Kamchatka. Winters from southern Europe and northwestern Africa to southeastern China and Japan.

Reference: del Hoyo, J., A. Elliott, and J. Sargatal, Eds. *Handbook of the Birds of the World, Volume 2*.



COLLARED SPARROWHAWK, *Accipiter cirrocephalus* Accipitridae
Papua New Guinea, 2017 August 24, not yet cataloged, 6.80k

Length: 12 to 15 inches, sexes alike, resident. Gray above and finely rufous-barred white below with a rufous collar.

Habitat: Forest, woodland, and scrub.

Range: New Guinea to Tasmania.

Reference: del Hoyo, J., A. Elliott, and J. Sargatal, Eds. *Handbook of the Birds of the World, Volume 2*.



NEW CALEDONIA GOSHAWK, *Accipiter haplochrous* Accipitridae
New Caledonia, 2017 October 17, not yet cataloged, 110fr

Length: 12 to 14 inches, sexes alike, resident. Black above and white below with a black throat.

Habitat: Tropical rain forest and forest edges.

Range: New Caledonia.

Reference: del Hoyo, J., A. Elliott, and J. Sargatal, Eds. *Handbook of the Birds of the World, Volume 2*.



WHITE-EYED BUZZARD, *Butastur teesa* Accipitridae
Sierra Leone, 2017 August 30, not yet cataloged, SS 40000le (L margin)

Length: 14 to 17 inches, sexes alike, resident. Grayish-brown above and brown-barred white below with white throat and eyes and a pale rufous upper tail.

Habitat: Dry open country.

Range: Southeastern Iran to southeastern Myanmar and southern India.

Reference: del Hoyo, J., A. Elliott, and J. Sargatal, Eds. *Handbook of the Birds of the World, Volume 2*.



LITTLE EAGLE, *Hieraetus morphnoides* Accipitridae
Papua New Guinea, 2017 August 24, not yet cataloged, 75t

Length: 18 to 22 inches, sexes alike, resident. Brown, paler below with mottled wings.
Habitat: Open forest, scrub, and savanna.

Range: Australia.

Reference: del Hoyo, J., A. Elliott, and J. Sargatal, Eds. *Handbook of the Birds of the World, Volume 2.*



NILGIRI WOOD-PIGEON, *Columba elphinstonii* Columbidae
India, 2017 September 18, not yet cataloged, 5r

Length: 14 to 17 inches, sexes alike, resident. Brownish purple above and gray below with a black-and-white checkered hindcollar and a bluish-gray head.

Habitat: Moist evergreen forest.

Range: Western India.

Reference: del Hoyo, J., A. Elliott, and J. Sargatal, Eds. *Handbook of the Birds of the World, Volume 4.*



YELLOW-LEGGED PIGEON, *Columba pallidiceps* Columbidae
Solomon Islands, 2017 August 21, not yet cataloged, \$10

Length: 14 to 15 inches, sexes similar, resident. Dark with multicolored iridescences, white head, and yellow legs.

Habitat: Primary forest and forest edges.

Range: Bismarck Archipelago and Solomon Islands

Reference: del Hoyo, J., A. Elliott, and J. Sargatal, Eds. *Handbook of the Birds of the World, Volume 4.*



BRONZE GROUND-DOVE, *Gallicolumba beccarii* Columbidae
Solomon Islands, 2017 August 21, not yet cataloged, \$10

Length: 7 to 8 inches, resident. The male (shown) is dark olive-green above and pale gray below with a blue-gray head and blackish-purple lower breast and belly. The female is gray below with a yellowish-brown belly.

Habitat: Forest.

Range: New Guinea to the Solomon Islands.

Reference: del Hoyo, J., A. Elliott, and J. Sargatal, Eds. *Handbook of the Birds of the World, Volume 4.*



WHITE-HEADED FRUIT-DOVE, *Ptilinopus eugeniae* Columbidae
Solomon Islands, 2017 August 21, not yet cataloged, \$10

Length: 7 to 9 inches, sexes alike, resident. Green above and pale green below with a white head, purplish-crimson throat and breast, and whitish shoulder patches.

Habitat: Forest and adjacent areas.

Range: Eastern Solomon Islands.

Reference: del Hoyo, J., A. Elliott, and J. Sargatal, Eds. *Handbook of the Birds of the World, Volume 4.*



ISLAND IMPERIAL-PIGEON, *Ducula pistrinaria* Columbidae
Solomon Islands, 2017 August 21, not yet cataloged, SS \$40 (R margin)

Length: 15 to 18 inches, sexes alike, resident. Gray above and pinkish below with a creamy-white head and bronzy-green tail.

Habitat: Primary and secondary forests.

Range: Bismarck Archipelago, islands off New Guinea, and the Solomon Islands.

Reference: del Hoyo, J., A. Elliott, and J. Sargatal, Eds. *Handbook of the Birds of the World, Volume 4*.

CHESTNUT-BELLIED IMPERIAL-PIGEON, *Ducula brenchleyi* Columbidae
Solomon Islands, 2017 August 21, not yet cataloged, \$10

Length: 16 inches, sexes alike, resident. Iridescent blackish gray above and dark purplish pink below with a silvery gray head and dark chestnut belly.

Habitat: Forest.

Range: Solomon Islands.

Reference: del Hoyo, J., A. Elliott, and J. Sargatal, Eds. *Handbook of the Birds of the World, Volume 4*.



STAR-SPOTTED NIGHTJAR, *Caprimulgus stellatus* Caprimulgidae
Djibouti, 2017 July 28, not yet cataloged, 240fr

Length: 9 inches, sexes similar, resident. Dark grayish brown above and buff-spotted brown below with small white patches near the wing tip and on the sides of the lower throat.

Habitat: Dry open bush and grassland.

Range: Northwestern Somalia to central Kenya.

Reference: del Hoyo, J., A. Elliott, and J. Sargatal, Eds. *Handbook of the Birds of the World, Volume 5*.



EMPRESS BRILLIANT, *Heliodoxa imperatrix* Trochilidae
Niger, 2017 September 11, not yet cataloged, SS 3300fr (LR margin)

Length: 5 to 7 inches, resident. The male (shown) is glittering dark green with a pale violet patch on the throat and a glittering golden-green belly. The female is bronzy-green with a green-flecked grayish throat and breast and a golden-green belly.

Habitat: Wet forest and adjacent areas.

Range: West-central Colombia and northwestern Ecuador.

Reference: del Hoyo, J., A. Elliott, and J. Sargatal, Eds. *Handbook of the Birds of the World, Volume 5*.



BLACK-BILLED WOODHOOPUE, *Phoeniculus somaliensis*, Phoeniculidae
Djibouti, 2017 July 28, not yet cataloged, 240fr

Length: 13 to 15 inches, sexes alike, resident. Iridescent blackish or greenish with a black bill and white spots on the wings and outer tail.

Habitat: Open dry thornbush and riparian woodland.

Range: Eritrea to northeastern Kenya.

Reference: del Hoyo, J., A. Elliott, and J. Sargatal, Eds. *Handbook of the Birds of the World, Volume 6*.



HEMPRICH'S HORNBILL, *Lophoceros hemprichii* Bucerotidae
Djibouti, 2017 July 28, not yet cataloged, SS 950fr (UR margin)

Length: 20 to 23 inches, resident. The male (shown) is creamy-edged dark brown above and white below with a red bill and brown head and throat. The female is smaller with a black base to the lower mandible and a pale green throat.

Habitat: Wooded watercourses.

Range: Eritrea to Djibouti, northeastern Uganda, and northwestern Kenya

Reference: del Hoyo, J., A. Elliott, and J. Sargatal, Eds. *Handbook of the Birds of the World, Volume 6*.



BLUE-BEARDED BEE-EATER, *Nyctyornis athertoni* Meropidae
Guinea, 2017 August 25, not yet cataloged, 12500fr

Length: 12 to 14 inches, sexes alike, resident. Green above and streaked buff below with a blue forehead and throat.

Habitat: Moist forest, forest clearings, and gardens.

Range: India to Vietnam and Hainan

Reference: del Hoyo, J., A. Elliott, and J. Sargatal, Eds. *Handbook of the Birds of the World, Volume 6*.



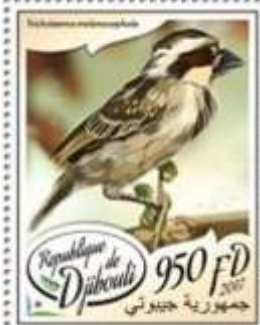
D'ARNAUD'S BARBET, *Trachyphonus darnaudii* Lybiidae
Djibouti, 2017 July 28, not yet cataloged, 240fr

Length: 6 to 8 inches, sexes alike, resident. White-spotted brown above, white or yellow below with a black forehead and throat and a black-spotted face and collar.

Habitat: Open woodlands, bushlands and grasslands

Range: Southeastern Sudan to northern Tanzania.

Reference: del Hoyo, J., A. Elliott, and J. Sargatal, Eds. *Handbook of the Birds of the World, Volume 10*.



BLACK-THROATED BARBET, *Tricholaema melanocephala* Lybiidae
Djibouti, 2017 July 28, not yet cataloged, SS 950fr

Length: 5 inches, sexes alike, resident. Yellow streaked and spotted black above and whitish below with a yellow or white superciliary and black chin and throat.

Habitat: Very dry woodland, brushland, and scrubland.

Range: Northern and central Ethiopia to north-central Tanzania.

Reference: del Hoyo, J., A. Elliott, and J. Sargatal, Eds. *Handbook of the Birds of the World, Volume 10*.



BEARDED WOODPECKER, *Dendropicos namaquus* Picidae
Djibouti, 2017 July 28, not yet cataloged, 240fr

Length: 10 to 11 inches, resident. The male (shown) is white barred yellowish brown with a white-spotted black forehead, red hindcrown, and a black-and-white striped head. The female lacks the red hindcrown.

Habitat: Woodland and dry savanna.

Range: Western Central African Republic and Sudan to South Africa.

Reference: del Hoyo, J., A. Elliott, and J. Sargatal, Eds. *Handbook of the Birds of the World, Volume 10*.



RED-BREASTED PYGMY-PARROT, *Micropsitta bruijnii* Psittaculidae
Solomon Islands, 2017 August 21, not yet cataloged, \$10

Length: 3.5 inches, resident. The male (shown) is green with an orange-red breast, blue-bordered yellow face, and rusty crown. The female is green above and yellow below with a whitish-buff forehead and blue crown.

Habitat: Forest and forest edges.

Range: New Guinea to the Solomon Islands.

Reference: del Hoyo, J., A. Elliott, and J. Sargatal, Eds. *Handbook of the Birds of the World, Volume 4.*



SAMOAN MYZOMELA, *Myzomela nigriventris* Meliphagidae
Samoa, 1988 August 17, Sc#731, 50s

Length: 4 to 5 inches, resident. The male (shown) is black with a red head, breast, and back. The female is dull olive above and gray below with a red lower back and rump.

Habitat: Lowland forest and fringe vegetation.

Range: Samoa and western American Samoa.

Reference: del Hoyo, J., A. Elliott, and J. Sargatal, Eds. *Handbook of the Birds of the World, Volume 13.*



BROAD-TAILED GRASSBIRD, *Schoenicola platyurus* Locustellidae
India, 2017 September 18, not yet cataloged. 5r

Length: 7 inches, sexes similar, resident. Reddish-brown above and whitish below with warm buff breast and flanks.

Habitat: Grassy and bracken-covered highlands,

Range: Southwestern India,

Reference: del Hoyo, J., A. Elliott, and J. Sargatal, Eds. *Handbook of the Birds of the World, Volume 11.*



NILGIRI PIPIT, *Anthus nilghiriensis* Motacillidae
India, 2017 September 18, not yet cataloged, 5r

Length: 6 to 7 inches, sexes alike, resident. Streaked brown above and streaked buff below with a buff supercilium.

Habitat: Upland grasslands.

Range: Extreme southwestern India.

Reference: del Hoyo, J., A. Elliott, and J. Sargatal, Eds. *Handbook of the Birds of the World, Volume 9.*



†**KAUAI AKIALOA, *Akialoa stejnegeri*** Fringillidae
Extinct (last recorded in 1967)
Togo, 2017 July 31, not yet cataloged, 800fr

Length: 7.5 inches, sexes alike, resident. Greenish with a long curved bill.
Habitat: Alaka'i Swamp.

Range: Kauai, Hawaii

Reference: del Hoyo, J., A. Elliott, and J. Sargatal, Eds. *Handbook of the Birds of the World, Volume 7.*

CLEMENTS 2017 UPDATE**Charles E. Braun, BU1364 & Jack R. Congrove, BU1424**

The Clements 2017 taxonomic update was released by Cornell University in August. Changes ranged from adding an order to minor typographic corrections. One new order is added (Cathartiformes) for the New World Vultures. Thus, we now recognize 40 extant orders. No fewer than 11 new families are added this year:

Modulatricidae (Dapple-throat and allies) three species: none on stamps

Rhodinocichlidae (Thrush-Tanager) Rusty Thrush-Tanager on stamps

Passerellidae (New World Buntings and Sparrows, All New World Embirizids)

Calyptophilidae (Chat-Tanagers) two species: Western Chat-Tanager & Eastern Chat-Tanager, both on stamps

Phaenicophilidae (Hispaniolan Tanagers) four species: Black-crowned Palm-Tanager, Gray-crowned Palm-Tanager, Green-tailed Warbler, and White-winged Warbler, all on stamps

Nesospingidae (Puerto Rican Tanager) not on stamps

Spindalidae (Spindalises) four species: Western Spindalis, Puerto Rican Spindalis, Hispaniolan Spindalis, and Jamaican Spindalis, all on stamps

Zeledoniidae (Wrenthrush) not on stamps

Teretistridae (Cuban Warblers) two species: Yellow-headed Warbler & Oriente Warbler, both on stamps

Icteriidae (Yellow-breasted Chat) one species, on stamps

Mitrospingidae (Mitrospingid Tanagers) two species, none on stamps

The table below shows the revised order of the 248 extant families accepted by Clements Checklist. The names of orders are in **BOLD CAPITAL** lettering and changes are noted in **bold blue** font. An additional extinct family (Mohoidae: Hawaiian Honeyeaters) is listed in brackets. The listing also provides the quantity of families in each order (in parentheses, after the name of each order), and the number of species in each family (in parentheses, after the name of each family).

| No. | Family | Members | No. | Family | Members |
|-----|-----------------------------|--------------------------------------------|-----|--------------------------------|---------------------------------|
| | STRUTHIONIFORMES (1) | | | PHOENICOPTERIFORMES (1) | |
| 1 | Struthionidae | Ostrich (2) | 16 | Phoenicopteridae | Flamingos (6) |
| | RHEIFORMES (1) | | | SPHENISCIFORMES (1) | |
| 2 | Rheidae | Rheas (2) | 17 | Spheniscidae | Penguins (18) |
| | TINAMIFORMES (1) | | | PROCELLARIIFORMES (4) | |
| 3 | Tinamidae | Tinamous (47) | 18 | Diomedidae | Albatrosses (15) |
| | CASUARIIFORMES (2) | | 26 | 19 | Procellariidae |
| 4 | Casuariidae | Cassowaries & Emu (4) | 20 | Hydrobatidae | Storm-Petrels (27) |
| | APTERYGIFORMES (1) | | | PHAETHONTIFORMES (1) | |
| 5 | Apterygidae | Kiwis (5) | 21 | Phaethontidae | Tropicbirds (3) |
| | ANSERIFORMES (3) | | | CICONIIFORMES (1) | |
| 6 | Anhimidae | Screamers (3) | 22 | Ciconiidae | Storks (19) |
| 7 | Anseranatidae | Magpie Goose (1) | | SULIFORMES (4) | |
| 8 | Anatidae | Ducks, Geese, & Waterfowl (164) | 23 | Fregatidae | Frigatebirds (5) |
| | GALLIFORMES (5) | | 32 | 24 | Sulidae |
| 9 | Megapodiidae | Megapodes (22) | 25 | Phalacrocoracidae | Cormorants & Shags (40) |
| 10 | Cracidae | Guans, Chachalacas, & Curassows (54) | 26 | Anhingidae | Anhingas (4) |
| 11 | Numididae | Guineafowl (6) | | PELECANIFORMES (5) | |
| 12 | Odontophoridae | New World Quail (33) | 27 | Pelecanidae | Pelicans (8) |
| 13 | Phasianidae | Pheasants, Grouse, & Allies (177) | 28 | Balaenicipitidae | Shoebill (1) |
| | GAVIIFORMES (1) | | 29 | Scopidae | Hamerkop (1) |
| 14 | Gaviidae | Loons (5) | 30 | Ardeidae | Herons, Egrets, & Bitterns (64) |
| | PODICIPEDIFORMES (1) | | 31 | Threskiornithidae | Ibises & Spoonbills (34) |
| 15 | Podicipedidae | Grebes (22) | | | |

| No. | Family | Members | No. | Family | Members |
|-----|---------------------------------|----------------------------------|-----|-----------------------------|----------------------------------|
| | CATHARTIFORMES (1) (new) | | | CUCULIFORMES (2) | |
| 32 | Cathartidae | New World Vultures (7) | 68 | Musophagidae | Turacos (23) |
| | ACCIPITRIFORMES (3) | | 69 | Cuculidae | Cuckoos (146) |
| 33 | Sagittariidae | Secretary-bird (1) | | STRIGIFORMES (2) | |
| 34 | Pandionidae | Osprey (1) | 70 | Tytonidae | Barn-Owls (18) |
| 35 | Accipitridae | Hawks, Eagles, & Kites (247) | 71 | Strigidae | Owls (207) |
| | OTIDIFORMES (1) | | | CAPRIMULGIFORMES (8) | |
| 36 | Otididae | Bustards (26) | 72 | Podargidae | Frogmouths (15) |
| | MESITORNITHIFORMES (1) | | 73 | Caprimulgidae | Nightjars & Allies (98) |
| 37 | Mesitornithidae | Mesites (3) | 74 | Nyctibiidae | Potoos (7) |
| | EURYPYGIFORMES (2) | | 75 | Steatornithidae | Oilbird (1) |
| 38 | Rhynochetidae | Kagu (1) | 76 | Aegothelidae | Owlet-Nightjars (10) |
| 39 | Eurypygidae | Sunbittern (1) | 77 | Apodidae | Swifts (112) |
| | GRUIFORMES (6) | | 78 | Hemiprocnidae | Treeswifts (4) |
| 40 | Rallidae | Rails, Gallinules, & Coots (144) | 79 | Trochilidae | Hummingbirds (343) |
| 41 | Sarothruridae | Flufftails (12) | | COLIIFORMES (1) | |
| 42 | Helionithidae | Finfoots (3) | 80 | Coliidae | Mousebirds (6) |
| 43 | Aramidae | Limpkin (1) | | LEPTOSOMIFORMES (1) | |
| 44 | Psophiidae | Trumpeters (3) | 81 | Leptosomidae | Cuckoo-Roller (1) |
| 45 | Gruidae | Cranes (15) | | TROGONIFORMES (1) | |
| | CHARADRIIFORMES (19) | | 82 | Trogonidae | Trogons (44) |
| 46 | Chionidae | Sheathbills (2) | | BUCEROTIFORMES (4) | |
| 47 | Pluvianellidae | Magellanic Plover (1) | 83 | Upupidae | Hoopoes (2) |
| 48 | Burhinidae | Thick-knees (10) | 84 | Phoeniculidae | Woodhoopoes & Scimitar-bills (8) |
| 49 | Pluvianidae | Egyptian Plover (1) | 85 | Bucorvidae | Ground-Hornbills (2) |
| 50 | Recurvirostridae | Stilts & Avocets (9) | 86 | Bucerotidae | Hornbills (59) |
| 51 | Ibidorhynchidae | Ibisbill (1) | | CORACIIFORMES (6) | |
| 52 | Haematopodidae | Oystercatchers (12) | 87 | Todidae | Todies (5) |
| 53 | Charadriidae | Plovers & Lapwings (67) | 88 | Momotidae | Motmots (14) |
| 54 | Pedionomidae | Plains-wanderer (1) | 89 | Alcedinidae | Kingfishers (117) |
| 55 | Thinocoridae | Seedsnipes (4) | 90 | Meropidae | Bee-eaters (28) |
| 56 | Rostratulidae | Painted-Snipes (3) | 91 | Coraciidae | Rollers (12) |
| 57 | Jacanidae | Jacanas (8) | 92 | Brachypteraciidae | Ground-Rollers (5) |
| 58 | Scolopacidae | Sandpipers & Allies (97) | | GALBULIFORMES (2) | |
| 59 | Turnicidae | Buttonquail (16) | 93 | Bucconidae | Puffbirds (36) |
| 60 | Dromadidae | Crab Plover (1) | 94 | Galbulidae | Jacamars (18) |
| 61 | Glareolidae | Pratincoles & Coursers (17) | | PICIFORMES (7) | |
| 62 | Stercorariidae | Skuas & Jaegers (7) | 95 | Lybiidae | African Barbets (42) |
| 63 | Alcidae | Auks, Murres, & Puffins (25) | 96 | Megalaimidae | Asian Barbets (34) |
| 64 | Laridae | Gulls, Terns, & Skimmers (98) | 97 | Capitonidae | New World Barbets (14) |
| | PTEROCLIFORMES (1) | | 98 | Semnornithidae | Toucan-Barbets (2) |
| 65 | Pteroclididae | Sandgrouse (16) | 99 | Ramphastidae | Toucans (36) |
| | COLUMBIFORMES (1) | | 100 | Indicatoridae | Honeyguides (17) |
| 66 | Columbidae | Pigeons & Doves (340) | 101 | Picidae | Woodpeckers (230) |
| | OPISTHOCOMIFORMES (1) | | | CARIAMIFORMES (1) | |
| 67 | Opisthocomidae | Hoatzin (1) | 102 | Cariamidae | Seriemas (2) |

| No. | Family | Members | No. | Family | Members |
|-----|----------------------------|------------------------------------------------|-----|----------------------------------|------------------------------------------|
| | FALCONIFORMES (1) | | | PASSERIFORMES (continued) | |
| 103 | Falconidae | Falcons & Caracaras (65) | 148 | Machaerirhynchidae | Boatbills (2) |
| | PSITTACIFORMES (4) | | 149 | Artamidae | Woodswallows (11) |
| 104 | Strigopidae | New Zealand Parrots (4) | 150 | Cracticidae | Bellmagpies & Allies (13) |
| 105 | Cacatuidae | Cockatoos (21) | 151 | Pityriaseidae | Bristlehead (1) |
| 106 | Psittaculidae | Old World Parrots (180) | 152 | Aegithinidae | Ioras (4) |
| 107 | Psittacidae | New World & African Parrots (168) | 153 | Campephagidae | Cuckooshrikes (87) |
| | PASSERIFORMES (142) | | 154 | Neosittidae | Sittellas (2) |
| 108 | Acanthisittidae | New Zealand Wrens (4) | 155 | Eulacestomatidae | Ploughbill (1) |
| 109 | Calyptomenidae | African & Green Broadbills (6) | 156 | Falcunculidae | Shrike-tit (1) |
| 110 | Eurylaimidae | Asian & Grauer's Broadbills (9) | 157 | Pachycephalidae | Whistlers & Allies (56) |
| 111 | Sapayoidae | Sapayoa (1) | 158 | Rhagologidae | Mottled Berryhunter (1) |
| 112 | Philepittidae | Asities (4) | 159 | Oreoicidae | Australo-Papuan Bellbirds (3) |
| 113 | Pittidae | Pittas (44) | 160 | Laniidae | Shrikes (33) |
| 114 | Thamnophilidae | Typical Antbirds (234) | 161 | Vireonidae | Vireos, Shrike-Babblers, & Erpornis (62) |
| 115 | Melanopareidae | Crescentchests (4) | 162 | Oriolidae | Old World Orioles (36) |
| 116 | Conopophagidae | Gnateaters (11) | 163 | Dicruridae | Drongos (25) |
| 117 | Grallariidae | Antpittas (53) | 164 | Rhipiduridae | Fantails (51) |
| 118 | Rhinocryptidae | Tapaculos (60) | 165 | Ifritidae | Ifrita (1) |
| 119 | Formicariidae | Anthrushes (11) | 166 | Monarchidae | Monarch Flycatchers (100) |
| 120 | Furnariidae | Ovenbirds & Woodcreepers (303) | 167 | Corvidae | Crows, Jays, & Magpies (125) |
| 121 | Tyrannidae | Tyrant Flycatchers (420) | 168 | Corcoracidae | White-winged Chough & Apostlebird (2) |
| 122 | Oxyruncidae | Sharpbill (1) | 169 | Paradisaeidae | Birds-of-paradise (42) |
| 123 | Cotingidae | Cotingas (66) | 170 | Melampittidae | Melampittas (2) |
| 124 | Pipridae | Manakins (54) | 171 | Petroicidae | Australasian Robins (47) |
| 125 | Tityridae | Tityras & Allies (33) | 172 | Picathartidae | Rockfowl (2) |
| 126 | Menuridae | Lyrebirds (2) | 173 | Chaetopidae | Rockjumpers (2) |
| 127 | Atrichornithidae | Scrub-birds (2) | 174 | Eupetidae | Rail-babbler (1) |
| 128 | Ptilonorhynchidae | Bowerbirds (26) | 175 | Panuridae | Bearded Reedling (1) |
| 129 | Climacteridae | Australasian Treecreepers (7) | 176 | Nicatoridae | Nicators (3) |
| 130 | Maluridae | Fairywrens (32) | 177 | Alaudidae | Larks (97) |
| 131 | Meliphagidae | Honeyeaters (185) | 178 | Hirundinidae | Swallows (86) |
| 132 | Dasyornithidae | Bristlebirds (3) | 179 | Stenostiridae | Fairy Flycatchers (9) |
| 133 | Pardalotidae | Pardalotes (4) | 180 | Paridae | Tits, Chickadees & Titmice (63) |
| 134 | Acanthizidae | Thornbills & Allies (64) | 181 | Remizidae | Penduline-Tits (11) |
| 135 | Pomatostomidae | Pseudo-Babblers (5) | 182 | Aegithalidae | Long-tailed Tits (11) |
| 136 | Orthonychidae | Logrunners (3) | 183 | Sittidae | Nuthatches (27) |
| 137 | Cnemophilidae | Satinbirds (3) | 184 | Tichodromidae | Wallcreeper (1) |
| 138 | Melanocharitidae | Berrypeckers & Longbills (10) | 186 | Troglodytidae | Wrens (85) |
| 139 | Mohouidae | Whiteheads (3) | 187 | Poliopitilidae | Gnatcatchers (15) |
| 140 | Paramythiidae | Tit & Crested Berrypeckers (2) | 188 | Cinclidae | Dippers (5) |
| 141 | Callaeidae | Wattlebirds (5) | 189 | Pycnonotidae | Bulbuls (144) |
| 142 | Notiomystidae | Stitchbird (1) | 190 | Regulidae | Kinglets (6) |
| 143 | Psophodidae | Whipbirds & Wedgebills (5) | 191 | Pnoepygidae | Cupwings (5) |
| 144 | Cinclosomatidae | Quail-thrushes & Jewel-babblers (11) | 192 | Macrosphenidae | African Warblers (21) |
| 145 | Platysteiridae | Wattle-eyes & Batises (30) | 193 | Cettiidae | Bush-Warblers & Allies (36) |
| 146 | Vangidae | Vangas, Helmetshrikes & Allies (39) | 194 | Phylloscopidae | Leaf-Warblers (76) |
| 147 | Malaconotidae | Bushshrikes & Allies (49) | 195 | Acrocephalidae | Reed-Warblers & Allies (61) |

| No. | Family | Members | No. | Family | Members |
|-----|----------------------------------|-------------------------------------------|-----|----------------------------------|------------------------------------------------|
| | PASSERIFORMES (continued) | | | PASSERIFORMES (continued) | |
| 196 | Locustellidae | Grassbirds & Allies (61) | 224 | Ptiligonatidae | Silky-flycatchers (4) |
| 197 | Donacobiidae | Donacobius (1) | 225 | Dulidae | Palmchat (1) |
| 198 | Bernieridae | Malagasy Warblers (11) | 226 | Hylocitridae | Hylocitrea (1) |
| 199 | Cisticolidae | Cisticolas & Allies (147) | 227 | Hypocoliidae | Hypocolius (1) |
| 200 | Sylviidae | Sylviid Warblers (33) | 228 | Peucedramidae | Olive Warbler (1) |
| 201 | Paradoxornithidae | Parrotbills, Wrenit, & Allies (36) | 229 | Calcaridae | Longspurs & Snow Buntings (6) |
| 202 | Zosteropidae | Yuhinas, White-eyes, & Allies (130) | 230 | Rhodinocichlidae | Thrush-Tanager (1) (new) |
| 203 | Timaliidae | Tree- & Scimitar-Babblers & Allies (52) | 231 | Parulidae | New World Warblers (110) |
| 204 | Pellorneidae | Ground Babblers & Allies (56) | 232 | Thraupidae | Tanagers & Allies (377) |
| 205 | Leiotherichidae | Laughingthrushes & Allies (146) | 233 | Passerellidae | New World Buntings & Sparrows (130) |
| 206 | Promeropidae | Sugarbirds (2) | 234 | Emberizidae | Old World Buntings (44) |
| 207 | Modulatricidae | Dapple-throat and Allies (3) (new) | 235 | Calyptophilidae | Chat-Tanagers (2) (new) |
| 208 | Irenidae | Fairy-bluebirds (2) | 236 | Phaenicophilidae | Hispaniolan Tanagers (4) (new) |
| 209 | Hylotiidae | Hyliotas (4) | 237 | Nesospingidae | Puerto Rican Tanager (1) (new) |
| 210 | Muscicapidae | Old World Flycatchers (317) | 238 | Spindalidae | Spindalises (4) (new) |
| 211 | Turdidae | Thrushes & Allies (168) | 239 | Zeledoniidae | Wrenthrush (1) (new) |
| 212 | Mimidae | Mockingbirds & Thrashers (34) | 240 | Teretistridae | Cuban Warblers (2) (new) |
| 213 | Sturnidae | Starlings (122) | 241 | Icteriidae | Yellow-breasted Chat (1) (new) |
| 214 | Buphagidae | Oxpeckers (2) | 242 | Mitrospingidae | Mitrospingid Tanagers (2) (new) |
| 215 | Chloropseidae | Leafbirds (11) | 243 | Cardinalidae | Cardinals & Allies (48) |
| 216 | Dicaeidae | Flowerpeckers (47) | 244 | Icteridae | Troupials & Allies (105) |
| 217 | Nectariniidae | Sunbirds & Spiderhunters (139) | 245 | Fringillidae | Finches, Euphonias, & Allies (225) |
| 218 | Prunellidae | Accentors (13) | 246 | Passeridae | Old World Sparrows (42) |
| 219 | Motacillidae | Wagtails & Pipits (66) | 247 | Ploceidae | Weavers & Allies (116) |
| 220 | Urocynchramidae | Przevalski's Pinktail (1) | 248 | Estrildidae | Waxbills & Allies (140) |
| 221 | Elachuridae | Spotted Elachura (1) | 249 | Viduidae | Indigobirds (20) |
| 222 | Bombycillidae | Waxwings (3) | | | |
| 223 | [Mohoidae] | Hawaiian Honeyeaters (5) [extinct] | | | |

Reference: Clements, J. F., T. S. Schulenberg, M. J. Iliff, D. Roberson, T. A. Fredericks, B. L. Sullivan, and C. L. Wood. 2017. *The eBird/Clements checklist of birds of the world: Version 2017*. Downloaded from <http://www.birds.cornell.edu/clementschecklist/august-2017/>

Changes Affecting Birds on Stamps

The Northern Harrier has been split into two species: Northern Harrier (*Circus hudsonius*) ranging throughout the Americas (issues from Tuvalu, Turks & Caicos, and USA) and Hen Harrier (*Circus cyaneus*). See “New Birds.”

Change Gray-breasted Partridge to Malaysian Partridge (*Arborophila campbelli*).

Change Glossy Swiftlet to Christmas Island Swiftlet (*Collocalia natalis*). Range: Christmas Island.

Change Emerald Toucanet to Northern Emerald Toucanet.

Cardinal Myzomela is split into two species: Cardinal Myzomela (*Myzomela cardinalis*) and Samoan Myzomela (*Myzomela nigriiventris*) (issues from Samoa). See “New Birds.”

Change Northern Shrike to Great Gray Shrike.

Change Silktail to Taveuni Silktail.

Black-chinned Laughingthrush is now *Montecincla cachinnans*.

Change Large Cactus-Finch to Espanola Cactus-Finch.

MARINE INVERTEBRATES

Editor

Ian Hunter, BU1619

New Listings



| Scott# | Denom | Common Name/Scientific Name | Family/Subfamily | Code |
|-----------------------------------------------------------------------------------------------------|--------|--------------------------------------------------------|------------------|------|
| AUSTRALIAN ANTARCTIC TERR. 2017 March 7 (East Antarctic Deep Sea Creatures) (SS/4) | | | | |
| L208 | \$1 | Antarctic Sea Star, <i>Odontaster validus</i> | Odontasteridae | A |
| L209 | \$1 | Antarctic Neosquid, <i>Alluroteuthis antarcticus</i> | Neoteuthidae | A |
| L210 | \$2 | Antarctic Pink Anemone, <i>Urticinopsis antarctica</i> | Actiniidae | A |
| L211 | \$2 | Dorid Nudibranch, <i>Tritoniella belli</i> | Tritoniidae | B |
| L211b | \$2 | U/I Deep Sea Bryozoan | | U B |
| L211b | \$2 | SS/4 (Sc#L208–11) | | |
| ARUBA 2017 March 31 (Underwater Panorama) (MS/4) | | | | |
| 533a | 90c | Elkhorn Coral, <i>Acropora palmata</i> | Acroporidae | A |
| 533b | 130c | U/I Tube Worm (w/ sea turtles & fish) | | U B |
| 533c | 220c | U/I Coral & Starfish (w/ fish) | | U B |
| BRITISH ANTARCTIC TERR. 2016 November 13 (Environmental Protection Antarctic Treaty) (Set/6) | | | | |
| 516 | 66p | Antarctic Krill, <i>Euphausia superba</i> | Euphausiidae | A |
| 2016 November 13 (Marine Life Antarctic Ocean Zones) (Set/4, MS/12) | | | | |
| 523 | 76p | Glacial Squid, <i>Galiteuthis glacialis</i> | Cranchiidae | A |
| 525 | £1.22 | Dumbo Octopus, <i>Cirrothauma murrayi</i> | Cirroteuthidae | A |
| 526b | 66p | Antarctic Krill, <i>Euphausia superba</i> | Euphausiidae | A |
| 526e | 66p | Glacial Squid, <i>Galiteuthis glacialis</i> | Cranchiidae | A |
| 526f | 66p | Pram Bug, <i>Phronima</i> sp. | Phronimidae | A |
| 526h | 66p | Colossal Squid, <i>Mesonychoteuthis hamiltoni</i> | Cranchiidae | A |
| 526k | 66p | Atolla Jellyfish, <i>Atolla wyvillei</i> | Atollidae | A |
| 526l | 66p | Dumbo Octopus, <i>Cirrothauma murrayi</i> | Cirroteuthidae | A |
| BULGARIA 2017 May 22 (Marine Life) (Joint Ukraine) (SS/2) | | | | |
| 4808b | 2l | a Bivalve, <i>Barnea candida</i> | Pholadidae | A |
| CAPE VERDE 2016 November 15 (WWF: Blue Shark) (Horiz strip/4) (Stylized) | | | | |
| 1014b | 60e | U/I Squid (being chased by shark) | | U B |
| CHINA (Taiwan) 2016 July 14 (Corals Type of 2014) (Set/4) | | | | |
| 4308 | \$3.50 | Hammer Coral, <i>Euphyllia ancora</i> | Euphylliidae | A |
| 4309 | \$5 | Mushroom Coral, <i>Fungia taiwanensis</i> | Fungiidae | A |
| 4310 | \$10 | a Soft Coral, <i>Scleronephthya gracillimum</i> | Ellisellidae | A |
| 4311 | \$15 | a Soft Coral, <i>Annella mollis</i> | Subergorgiidae | A |
| 2016 October 22 (PhilaTaipei 2016 World Stamp Exhibition) (SS/2) | | | | |
| 4328b | 32c | U/I Corals & Jellyfish (w/ fish) (also in Bot margin) | | U B |
| 2017 January 5 (Starfish) (Set/4) | | | | |
| 4335 | \$5 | Necklace Starfish, <i>Fromia monilis</i> | Goniasteridae | A |
| 4336 | \$5 | Cushion Star, <i>Culcita novaeguineae</i> | Oreasteridae | A |
| 4337 | \$5 | Crown-of-Thorns Starfish, <i>Acanthaster planci</i> | Acanthasteridae | A |
| 4338 | \$5 | Blue Starfish, <i>Linckia laevigata</i> | Ophidiasteridae | A |

| | | | | |
|-------------------------------------------|--------|---------------------------------------------------------------|----------------|-----|
| CHRISTMAS ISLAND | | 2016 April 26 (Robber Crab) (Pair & Single) | | |
| 548a | \$1 | Robber Crab, <i>Birgus latro</i> (greenish-yellow denom) | Coenobitidae | A |
| 548b | \$1 | Robber Crab, <i>Birgus latro</i> (turquoise denom) | Coenobitidae | A |
| 549 | \$2 | Robber Crab, <i>Birgus latro</i> | Coenobitidae | A |
| | | 2016 August 23 (Shells) (2ea Pairs) | | |
| 550a | \$1 | Scorpion Conch, <i>Lambis scorpius</i> | Strombidae | A |
| 550b | \$1 | Commercial Top Shell, <i>Tectus niloticus</i> | Tegulidae | A |
| 551a | \$2 | Tiger Cone Shell, <i>Conus canonicus</i> | Conidae | A |
| 551b | \$2 | Fluted Giant Clam, <i>Tridacna squamosa</i> | Tridacnidae | A |
| DENMARK | | 2017 January 2 (Shellfish) (Bklt/10) | | |
| 1765 | 8k | Edible Crab, <i>Cancer pagurus</i> | Cancridae | A |
| 1766 | 8k | Norway Lobster, <i>Nephrops norvegicus</i> | Nephropidae | A |
| 1767 | 8k | North Sea Shrimp, <i>Crangon crangon</i> | Crangonidae | A |
| 1768 | 8k | Blue Mussel, <i>Mytilus edulis</i> | Mytilidae | A |
| 1769 | 8k | European Flat Oyster, <i>Ostrea edulis</i> | Ostreidae | A |
| 1769a | | Bklt/10 (2ea Sc#1765–69) | | |
| FRANCE | | 2015 April 24 (Way of St. James) (MS/4) | | |
| 4802 | Margin | LL: U/I Shell | | U Z |
| | | 2016 January 30 (Sense of Hearing) (Bklt/12) | | |
| 4981 | (70c) | U/I Sea Shell | | U A |
| FRENCH POLYNESIA | | 2016 November 3 (Fertility) (Bklt/6) (s/a) | | |
| 1177c | 100fr | U/I Conch Shell (used as horn) | | U B |
| | | 2017 January 3 (Shells) (Bklt/6) (s/a) | | |
| 1181a | 100fr | Silver Conch, <i>Lentigo lentiginosus</i> | Strombidae | A |
| 1181b | 100fr | Papal Mitre, <i>Mitra papalis</i> | Mitridae | A |
| 1181c | 100fr | Cosmopolitan Hairy Triton, <i>Monoplex aquatilis</i> | Ranellidae | A |
| 1181d | 100fr | Nussatella Cone, <i>Conus nussatella</i> | Conidae | A |
| 1181e | 100fr | Crenulate Auger, <i>Oxymeris maculata</i> | Terebridae | A |
| 1181f | 100fr | Clathrate Drupe, <i>Drupa clathrata</i> | Muricidae | A |
| FR. SOUTHERN & ANTARCTIC TERR. | | 2016 January 2 (Diatoms) (Single) | | |
| 541 | €2.80 | U/I Diatoms | | U A |
| | | 2017 January 2 (Foraminifera) (Single) | | |
| 557 | €1.24 | a Globigerinid Foraminifera, <i>Turborotalita quinqueloba</i> | Globigerinidae | A |
| | | 2017 January 2 (Amphipods) (MS/4) | | |
| 567a | 80c | <i>Epimeria robusta</i> | Epimeriidae | A |
| 567b | 80c | <i>Epimeria inermis</i> | Epimeriidae | A |
| 567c | €1.24 | <i>Echiniphimedia scotti</i> | Iphimediidae | A |
| 567d | €1.55 | <i>Anchiphimedia dorsalis</i> | Iphimediidae | A |
| GUERNSEY | | 2016 May 6 (Victor Hugo) (Bklt/4) | | |
| 1337 | 70p | U/I Octopus (scene from “The Toilers of the Sea”) | | U A |
| | | 2016 July 27 (Island of Herm) (SS/6) | | |
| 1347 | 43p | Oysters, <i>Ostrea edulis</i> | Ostreidae | A |
| 1348 | 57p | Mint Sauce Worm, <i>Symsagittifera roscoffensis</i> | Sagittiferidae | A |
| 1349 | 58p | U/I Cowrie Shells | Cypraeidae | U A |
| 1352a | | SS/6 (Sc#1347–52) | | |

| | | | | |
|--------------------------------------|---------|----------------------------------------------------------------------|----------------|-----|
| GRENADA GRENADINES | | 2016 September 9 (Flowers) (SS/2) | | |
| 2969b | \$7 | a Land Snail, <i>Bulimulus wiebesi</i> | Bulimulidae | A |
| GUYANA | | 2015 November 2 (Christmas: Ptg by Fra Filippo Lippi) (Set/4) | | |
| 4421 | \$80 | Stylized Scallop (architectural form) | | S B |
| ISRAEL | | 2016 June 21 (Summer) | | |
| 2106 | 4.10s | Stylized Shells (on cartoon beach) (perf 13×13¼) (w/ tab) | | S |
| 2106a | 4.10s | Stylized Shells (on cartoon beach) (perf 14×14½) | | S |
| | | 2016 September 13 (Autumn) | | |
| 2114 | 4.10s | Stylized Shells on tab | | S Z |
| 2114a | | SS/4 (Sc#2092, 2099e, 2106a, 2114) | | |
| ITALY | | 2016 May 14 (Alghero Red Coral) (Single) | | |
| 3384 | 75c | Red Coral, <i>Corallium</i> sp. (w/ red coral carving) | Coralliidae | U A |
| | | 2016 July 26 (30th anniv. Slow Food Organization) (Single) | | |
| 3400 | 95c | Stylized Snail | | S |
| MALAYSIA | | 2017 January 24 (Traditional Food) (Set/3) | | |
| 1653 | 95c | U/I Shrimp (Makanan Perayaan Cina) | | U B |
| 1654 | \$1.05 | U/I Shrimp (Makanan Perayaan Cina) | | U B |
| | | 2017 March 16 (Traditional Food) (Set/3) | | |
| 1668 | 80c | U/I Shrimp & Molluscs (Dayak Food) | | U B |
| MONACO | | 2017 May 2 (Red Coral) | | |
| 2882 | 5c | Red Coral, <i>Corallium rubrum</i> | Coralliidae | A |
| | | 2017 August 21 (Monaco Exploration Initiative) (SS/3) | | |
| 2902 | Margin | Bot: U/I Corals (w/ research vessel, diver, & submersible) | | U Z |
| MONTSERRAT | | 2017 May 11 (Caribbean Crabs) (MS/4 & SS/1) | | |
| 1392a | \$5.50 | Batwing Coral Crab, <i>Carpilius corallinus</i> | Carpiliidae | A |
| 1392b | \$5.50 | Caribbean Hermit Crab, <i>Coenobita clypeatus</i> | Coenobitidae | A |
| 1392c | \$5.50 | Red Land Crab, <i>Gecarcinus quadratus</i> | Gecarcinidae | A |
| 1392d | \$5.50 | Blue Land Crab, <i>Cardisoma guanhumi</i> | Gecarcinidae | A |
| 1393 | SS \$10 | Atlantic Ghost Crab, <i>Ocypode quadrata</i> | Ocypodidae | A |
| NETHERLANDS | | 2016 (Fishing Communities) (5ea Bklt/2 & SS/5) | | |
| 1507 | (73c) | U/I Shrimp (Zoutkamp) (perf 14½×14¼) | | U B |
| 1507a | (73c) | U/I Shrimp (Zoutkamp) (perf 13½×12¾) | | U B |
| 1507b | | Bklt/2 (Sc#1507a) (Zoutkamp) | | |
| | Margin | Bot: U/I Crab | | U Z |
| unl | | MS/5 (Sc#1507a) (Zoutkamp) | | |
| | Margin | Bot: U/I Crab | | U Z |
| 1510b | | Bklt/2 (Sc#1510a) (Scheveningen) | | |
| | Margin | U/I Crab | | U Z |
| unl | | MS/5 (Sc#1510a) (Scheveningen) | | |
| | Margin | Bot: U/I Crab | | U Z |
| 1510c | | SS/5 (Sc#1506–10) | | |
| | Margin | Ctr: U/I Shells | | U Z |
| NEW ZEALAND (Ross Dependency) | | 2016 November 16 (Antarctic Sea Floor) (SS/5) | | |
| L145 | \$1 | U/I Stalked Crinoid | | U A |
| L146 | \$1.80 | Sea Star, <i>Odontaster validus</i> | Odontasteridae | A |
| L147 | \$2.20 | Sponge, <i>Haliclona dancoi</i> | Chalinidae | A |

NEW ZEALAND (Ross Dependency) (continued)

| | | | | |
|--------|--------|----------------------------------------|---------------|-----|
| L148 | \$2.70 | Hydroid, <i>Branchiocerianthus</i> sp. | Corymorphidae | U A |
| L149 | \$3.30 | U/I Sea Spider | | U A |
| L149a | | SS/5 (Sc#L145–49) | | |
| Margin | | UL: U/I Stalked Crinoid | | U Z |

PALAU**2016 May 18** (World of Sea & Reef Type Redrawn) (MS/40)

| | | | | |
|--------|-----|---------------------------------------|-------------|-----|
| 1326k | 47c | Red Dahlia Anemone, <i>Tealia</i> sp. | Actiniidae | U B |
| 1326z | 47c | Octopus, <i>Octopus</i> sp. | Octopodidae | U A |
| 1326aa | 47c | Purple Sea Fan, <i>Gorgonia</i> sp. | Gorgoniidae | U B |
| 1326ab | 47c | Squid, <i>Loligo</i> sp. | Loliginidae | U A |
| 1326ae | 47c | Queen Conch, <i>Strombus</i> sp. | Strombidae | U A |
| 1326ag | 47c | U/I Starfish | | U A |
| 1326ak | 47c | a Spiny Lobster, <i>Palinurus</i> sp. | Palinuridae | U A |
| 1326al | 47c | Mangrove Crab, <i>Scylla serrata</i> | Portunidae | A |
| 1326am | 47c | Giant Clam, <i>Tridacna</i> sp. | Tridacnidae | U A |

2016 October 1 (Jellyfish Lake) (MS/6)

| | | | | |
|-------|--------|-------------------------------------------------------------------------|-------------|---|
| 1339a | \$1.20 | Golden Jellyfish, <i>Mastigias</i> cf. <i>papua etpisoni</i> (w/ coral) | Mastigiidae | A |
| 1339b | \$1.20 | Same species (large school) | | A |
| 1339c | \$1.20 | Same species (fisheye view toward surface) | | A |
| 1339d | \$1.20 | Same species (view toward surface) | | A |
| 1339e | \$1.20 | Same species (w/ diver) | | A |
| 1339f | \$1.20 | Same species (three jellyfish) | | A |

2016 October 1 (Giant Clams) (MS/6)

| | | | | |
|-------|--------|------------------------------------------------|-------------|---|
| 1340a | \$1.20 | True Giant Clam, <i>Tridacna gigas</i> | Tridacnidae | A |
| 1340b | \$1.20 | Bear Claw Giant Clam, <i>Hippopus hippopus</i> | Tridacnidae | A |
| 1340c | \$1.20 | China Giant Clam, <i>Tridacna</i> sp. | Tridacnidae | A |
| 1340d | \$1.20 | Smooth Giant Clam, <i>Tridacna derasa</i> | Tridacnidae | A |
| 1340e | \$1.20 | Elongated Giant Clam, <i>Tridacna maxima</i> | Tridacnidae | A |
| 1340f | \$1.20 | Fluted Giant Clam, <i>Tridacna squamosa</i> | Tridacnidae | A |

2016 October 1 (Crabs) (MS/3)

| | | | | |
|-------|--------|-----------------------------------|--------------|-----|
| 1346a | \$1.75 | U/I Hermit Crab | | U A |
| 1346b | \$1.75 | U/I Land Crab | | U A |
| 1346c | \$1.75 | Coconut Crab, <i>Birgus latro</i> | Coenobitidae | A |

PITCAIRN ISLANDS**2016 December 7** (Pitcairn Language) (MS/8)

| | | | | |
|------|-----|--------------------------------|--------------|-----|
| 825a | 20c | Sea Urchin, <i>Diadema</i> sp. | Diadematidae | U A |
|------|-----|--------------------------------|--------------|-----|

POLAND**2016 August 31** (Fish) (Set/4)

| | | | | |
|------|----|---------------------|--|-----|
| 4245 | 2z | U/I Shell (w/ fish) | | U B |
|------|----|---------------------|--|-----|

PORTUGAL**2016 October 31** (Fishing Industry) (Pair & Bklt/2)

| | | | | |
|-------|-----|------------------------------------------------|--|-----|
| 3868 | 80c | U/I Squids (people working in canning factory) | | U B |
| 3869a | | Horiz pair (Sc#3868–69) | | |

ST. VINCENT**2015 December 31** (Coral Reefs) (MS/6, MS/4, & 2ea SS/1)

| | | | | |
|-------|--------|--------------------------|--|-----|
| 4037a | \$3.15 | U/I hard branching Coral | | U A |
| 4037b | \$3.15 | U/I hard branching Coral | | U A |
| 4037c | \$3.15 | U/I hard branching Coral | | U A |
| 4037d | \$3.15 | U/I hard branching Coral | | U A |
| 4037e | \$3.15 | U/I hard branching Coral | | U A |
| 4037f | \$3.15 | U/I hard branching Coral | | U A |
| 4037 | Margin | U/I Coral | | U Z |

ST. VINCENT (continued)

| | | | | |
|-------|--------|---------------------------------------------------------------------|--|-----|
| 4038a | \$3.25 | U/I Soft Coral | | U A |
| 4038b | \$3.25 | U/I Sea Fan | | U A |
| 4038c | \$3.25 | U/I hard Lettuce Coral | | U A |
| 4038d | \$3.25 | U/I hard branching Coral | | U A |
| 4038 | Margin | Bot: U/I Coral | | U Z |
| 4039 | \$10 | U/I hard branching Coral (w/ yellow reef fish) (also in Bot margin) | | U A |
| 4040 | \$10 | U/I hard branching Coral (w/ small reef fish) (also in L margin) | | U A |

SAMOA**2016 March 7** (Marine Life & Birds) (Set/12)

| | | | | |
|------|--------|---------------------------------------------|-------------|---|
| 1222 | \$2 | Flower Pot Coral, <i>Acropora excelsa</i> | Acroporidae | A |
| 1228 | \$4.70 | Staghorn Coral, <i>Acropora cervicornis</i> | Acroporidae | A |

2016 December 21 (Christmas) (Block/4)

| | | | | |
|-------|--------|----------------------------------------------------|--|-----|
| 1269b | \$2.10 | U/I Shells (w/ Christmas ornaments in beach scene) | | U B |
| 1269c | \$2.10 | U/I Shells & Starfish (w/ gift box in beach scene) | | U B |

SIERRA LEONE**2015 August 21** (Sea Shells) (MS/4 & SS/1)

| | | | | |
|-------|------------|----------------------------------------------------------|-------------|-----|
| 3396a | 5500le | Inequivalve Ark, <i>Anadara inaequalvis</i> | Arcidae | A |
| 3396b | 5500le | Bubble Turnip Shell, <i>Rapa rapa</i> | Muricidae | A |
| 3396c | 5500le | Wandering Triton, <i>Ranella olearium</i> | Ranellidae | A |
| 3396d | 5500le | a Murex Shell, <i>Rapana rapiformis</i> | Muricidae | A |
| 3396 | Margin | UL: Triton silhouette | | S Z |
| 3416 | SS 22000le | Atlantic Thorny Oyster, <i>Spondylus americanus</i> | Spondylidae | A |
| | Margin | Bot: Eyed Cowrie, <i>Arestorides argus contrastriata</i> | Cypraeidae | Z |
| | | UR: U/I Shells | | U Z |

2016 August 29 (Sea Shells) (MS/4 & SS/1)

| | | | | |
|-------|------------|----------------------------------------------------------------|------------|-----|
| 3898a | 6000le | Short-spined Murex, <i>Murex aduncospinosus</i> | Muricidae | A |
| 3898b | 6000le | Arabian Cowrie, <i>Mauritia arabica arabica</i> | Cypraeidae | A |
| 3898c | 6000le | U/I Shell (Cap: <i>Namius latinicus prolongicus</i>) | | U A |
| 3898d | 6000le | Horned Helmet, <i>Cassia cornuta</i> | Cassidae | A |
| 3918 | SS 24000le | Adjusta Murex, <i>Chicoreus brunneus</i> | Muricidae | A |
| | Margin | UL: Horned Helmet, <i>Cassia cornuta</i> | Cassidae | Z |
| | | UR: Short-spined Murex, <i>Murex aduncospinosus</i> | Muricidae | Z |
| | | Bot: Three U/I Shells (Cap: <i>Selasphorus rufus</i> [a bird]) | | U Z |

2016 December 29 (Corals) (MS/4 & SS/1)

| | | | | |
|-------|------------|----------------------------------------------------|-------------------|-----|
| 4061a | 6000le | <i>Dendronephthya</i> sp. | Nephtheidae | U A |
| 4061b | 6000le | a Bubble Coral, <i>Plerogyra sinuosa</i> | Caryophylliidae | A |
| 4061c | 6000le | Staghorn Coral, <i>Acropora cervicornis</i> | Acroporidae | A |
| 4061d | 6000le | <i>Sarcophyton</i> sp. | Alcyoniidae | U A |
| 4080 | SS 24000le | U/I Soft Coral | Order: Alcyonacea | U A |
| | Margin | LL: Great Star Coral, <i>Montastraea cavernosa</i> | Montastraeidae | Z |
| | | LR: <i>Dendronephthya</i> sp. | Nephtheidae | U Z |

SOLOMON ISLANDS**2017 April 12** (Ptgs by Botticelli) (MS/4)

| | | | | |
|-------|------|-----------------------------------|--|-----|
| 2248b | \$10 | Stylized Shell ("Birth of Venus") | | S B |
|-------|------|-----------------------------------|--|-----|

SPAIN**2016 July 18** (Protected Fauna) (Set/3)

| | | | | |
|------|-------|--------------|--|-----|
| 4140 | €1.15 | U/I Crayfish | | U A |
|------|-------|--------------|--|-----|

2017 January 20 (Gastronomy) (Single)

| | | | | |
|------|-------|----------------------------|--|-----|
| 4178 | (60c) | U/I Shrimp (Huelva, Spain) | | U B |
|------|-------|----------------------------|--|-----|

| | | | | | |
|--------------------------------|-----------|--------------------------------------------------------------------------|---------------|--|-----|
| SURINAME | | 2017 May 17 (Shells) (Block/6) | | | |
| 1507a | \$2 | Pelican's Foot, <i>Aporrhais pespelecani</i> | Aporrhaidae | | A |
| 1507b | \$3 | <i>Aporrhais seresianus</i> | Aporrhaidae | | A |
| 1507c | \$4 | Babylon shell, <i>Babylonia areolata</i> | Babyloniidae | | A |
| 1507d | \$6 | Spotted Babylon, <i>Babylonia papillaris</i> | Babyloniidae | | A |
| 1507e | \$7 | Glory-of-the-Sea Cone, <i>Conus gloriamaris</i> | Conidae | | A |
| 1507f | \$8 | Samar Conch, <i>Canarium labiatum</i> | Strombidae | | A |
| TANZANIA | | 2013 April 26 (Zanzibar Tourism) (MS/6) | | | |
| 2706f | 700sh | Coconut Crab, <i>Birgus latro</i> (on palm tree) | Coenobitidae | | A |
| | | 2014 March 25 (Marine Life) (MS/6, MS/4, & SS/1) | | | |
| 2744b | 1600sh | U/I Crab (swimming) | | | U A |
| 2744d | 1600sh | U/I Sea Star & Sea Whip | | | U A |
| 2744e | 1600sh | U/I Lobster | | | U A |
| 2744f | 1600sh | Horse Conch, Lettered Olives, Chestnut Cowries | | | U B |
| 2745a | 1600sh | U/I Crab (swimming) | | | U A |
| 2745c | 1600sh | U/I Octopus | | | U A |
| 2745d | 1600sh | U/I Lobster | | | U A |
| 2745e | SS 1600sh | U/I Octopus (Sc#2745c) | | | U A |
| TONGA | | 2016 March 2 (Marine Life & Birds) (Set/12) | | | |
| 1300 | 90s | U/I Stony Coral | | | U A |
| TONGA (Niufo'ou) | | 2016 March 2 (Marine Life & Birds) (Set/12) | | | |
| 349 | 1.10pa | U/I Stony Coral | | | U A |
| TURKISH REP. N. CYPRUS | | 2017 March 23 (Towns: Cittaslow Emblem) (Set/3) | | | |
| 805 | 60k | Small Stylized Snail (Galateia) | | | S C |
| 806 | 1l | Small Stylized Snail (Agios Sergios) | | | S C |
| 807 | 2l | Small Stylized Snail (Lefke) | | | S C |
| TUVALU | | 2017 February 15 (Jellyfish) (MS/4 & SS/2) | | | |
| 1376a | \$2.50 | Northern Sea Nettle, <i>Chrysaora melanaster</i> | Pelagiidae | | A |
| 1376b | \$2.50 | Lion's Mane Jellyfish, <i>Cyanea capillata</i> | Cyaneidae | | A |
| 1376c | \$2.50 | Mauve Stinger, <i>Pelagia noctiluca</i> | Pelagiidae | | A |
| 1376d | \$2.50 | Jelly Blubber, <i>Catostylus tagi</i> | Catostylus | | A |
| 1377a | SS \$3.50 | White-spotted Jellyfish, <i>Phyllorhiza punctata</i> , | Mastigiidae | | A |
| 1377b | SS \$3.50 | Sea Wasp, <i>Chironex fleckeri</i> | Chirodropidae | | A |
| UNITED ARAB EMIRATES | | 2016 March 2 (Pearl of UAE: World's Oldest Natural Pearl) (Set/2) | | | |
| 1154 | 3d | U/I Oyster (w/ pearl) | | | U B |
| 1155 | 10d | U/I Oyster (w/ pearl) | | | U B |
| UNITED NATIONS (Vienna) | | 2017 May 11 (Endangered Species) (Block/4) | | | |
| 602 | 80c | a Nautilus, <i>Nautilus</i> sp. | Nautilidae | | U A |
| UNITED STATES | | 2017 January 28 (Seashells) (2ea Strip/4) | | | |
| 5163 | (34c) | Queen Conch, <i>Strombus gigas</i> | Strombidae | | A |
| 5164 | (34c) | Pacific Calico Scallop, <i>Argopecten gibbus</i> | Pectinidae | | A |
| 5165 | (34c) | Alphabet Cone, <i>Conus spurius</i> | Conidae | | A |
| 5166 | (34c) | Zebra Nerite, <i>Neritina natalensis</i> | Neritidae | | A |
| 5166a | | Strip/4 (Sc#5163-66) (die cut 11¼×10¾) | | | |

UNITED STATES (continued)

| | | | | |
|-------|-------|--------------------------------------------------|------------|---|
| 5167 | (34c) | Alphabet Cone, <i>Conus spurius</i> | Conidae | A |
| 5168 | (34c) | Zebra Nerite, <i>Neritina natalensis</i> | Neritidae | A |
| 5169 | (34c) | Queen Conch, <i>Strombus gigas</i> | Strombidae | A |
| 5170 | (34c) | Pacific Calico Scallop, <i>Argopecten gibbus</i> | Pectinidae | A |
| 5170a | | Coil Strip/4 (Sc#5167-70) (die cut 9¾ vert) | | |

VENEZUELA**2016 October 13** (Flora & Fauna) (Block/8)

| | | | | |
|-------|------|---------------------------------------------------|--------------|---|
| 1732f | 110b | Caribbean Hermit Crab, <i>Coenobita clypeatus</i> | Coenobitidae | A |
|-------|------|---------------------------------------------------|--------------|---|

VIRGIN ISLANDS**2017 July 5** (Marine Life) (Set/12)

| | | | | |
|------|--------|--------------------------------------------------------|-----------------|---|
| 1172 | 10c | Grooved Brain Coral, <i>Diploria labyrinthiformis</i> | Faviidae | A |
| 1173 | 15c | Spiny Flower Coral, <i>Mussa angulosa</i> | Mussidae | A |
| 1174 | 18c | Elkhorn Coral, <i>Acropora palmata</i> | Acroporidae | A |
| 1175 | 40c | Flamingo Tongue, <i>Cyphoma gibbosum</i> | Ovulidae | A |
| 1176 | 50c | Cushion Sea Star, <i>Oreaster reticularis</i> | Oreasteridae | A |
| 1177 | 60c | Queen Conch, <i>Strombus gigas</i> | Strombidae | A |
| 1178 | 80c | Caribbean Reef Squid, <i>Sepioteuthis sepioidea</i> | Loliginidae | A |
| 1179 | \$1 | Pederson Cleaner Shrimp, <i>Periclimenes pedersoni</i> | Palaemonidae | A |
| 1180 | \$1.50 | Branching Vase Sponge, <i>Callyspongia vaginalis</i> | Callyspongiidae | A |
| 1181 | \$2.50 | Common Octopus, <i>Octopus vulgaris</i> | Octopodidae | A |

ANSWERS TO BIOLOGY QUIZ (page 286)

1. C. White-tailed deer cause 1.5 million traffic accidents each year
2. A. Most people can go only three days without water, while the average body can survive up to three weeks without food.
3. D. They are most active at dawn and dusk. Mule deer, coyotes, and porcupines are examples.
4. D. The only surviving examples of monotremes are all indigenous to Australia and New Guinea. Like all mammals, female monotremes nurse their young with milk.
5. C. Phylum is a taxonomic rank below Kingdom and above Class.
6. B. Both are composed of eukaryotic cells that have membrane-bound organelles, especially a nucleus, as opposed to prokaryotic cells that make up the Archaea and Bacteria domains.
7. D. Humans have 23 pairs of chromosomes. The sperm and egg cells each contain one half of the pairs.
8. D. There are about 1,500 living rodent species out of about 4,000 living mammal species overall.

NATIVE FRESHWATER FISH

On 1 March 2017, New Zealand issued a colorful set of five stamps (Sc#2710–14) and a souvenir sheet depicting endemic freshwater fish. A limited edition imperforate SS/5 (2,000 numbered copies) was also produced.



Native Freshwater Fish
New Zealand, 2017, Sc#2714a

About three-quarters of the 40 freshwater fish species found in New Zealand are currently under threat due to destruction of habitat, migration barriers, and the introduction of predatory species such as trout.

The \$1 stamp shows a Lowland Longjaw Galaxias (*Galaxias cobitinis*). This fish is named after its distinctive upturned lower jaw and found in only a few inland streams and the Kauru and Kakanui Rivers. Fewer than 250 mature adults are believed to exist. Its elongated shape enables the fish to burrow into the gravel to lay eggs, feed, and to survive during flooding or low flows.

The \$1.80 stamp shows a Redfin Bully (*Gobiomorphus huttoni*). The male of this distinctive red-marked fish guards the female's eggs until they hatch. The larvae of the species wash out to sea and return to fresh water as juveniles. They tend to live close to the coast in stony streams and these acrobatic climbers can be found above waterfalls.

A Longfin Eel (*Anguilla dieffenbachii*) is depicted on the \$2.20 stamp. This fish is found only in New Zealand and with a life span of up to 100 years, it can grow up to two meters in length, but has been a victim of over-fishing.

The \$2.70 stamp has a generic Lamprey. The lamprey is a primitive jawless fish that is often mistaken for an eel. Adults spend most of their life at sea as parasites on other fish, returning to fresh water to breed.

A Torrentfish (*Cheimarrichthys fosteri*) is shown on the \$3.30 stamp. This fish is a species endemic to New Zealand that prefers fast-flowing water and can anchor itself to the riverbed with its pectoral fins to prevent being washed away.

Each of the species also appears in the margin of the SS/5.

The designer was Stephen Fuller of Wellington, New Zealand. The stamps were printed using offset lithography by Southern Colour Print.



ICHTHYOLOGY

Associate Editor

J. Dale Shively, BU1832

New Listings



| Scott# | Denom | Common Name/Scientific Name | Family/Subfamily | Code |
|-----------------------------------------------------------------------------|--------|----------------------------------------------------------------------|------------------|------|
| ANTIGUA | | | | |
| 2016 June 8 (WWF: Atlantic Goliath Grouper) (photo) (Strip/4 & MS/8) | | | | |
| 3336a | \$3.25 | Atlantic Goliath Grouper, <i>Epinephelus itajara</i> (head facing R) | Serranidae | A |
| 3336b | \$3.25 | Same species (head facing L) | | A |
| 3336c | \$3.25 | Same species (facing forward) | | A |
| 3336d | \$3.25 | Same species (entire fish) | | A |
| 3336e | | MS/8 (2ea Sc#3336a-d) | | |
| ARUBA | | | | |
| 2017 March 31 (Underwater Panorama) (MS/4) | | | | |
| 533a | 90c | U/I rays & fish (Bluehead Wrasse?) | --- | UC |
| 533b | 130c | U/I reef fish (angelfish, sergeant major fish?) | --- | UC |
| 533c | 220c | U/I reef fish (parrot fish) | --- | UC |
| 534d | 650c | U/I reef fish (butterfly fish) | --- | UC |
| ASCENSION | | | | |
| 2017 April 12 (Moray Eels) (Set /6) | | | | |
| 1177 | 20p | Broadbanded Moray Eel, <i>Channomuraena vittata</i> | Muraenidae | A |
| 1178 | 35p | Whitespotted Moray Eel, <i>Gymnothorax johnsoni</i> | Muraenidae | A |
| 1179 | 50p | Chain Moray Eel, <i>Echidna catenata</i> | Muraenidae | A |
| 1180 | 55p | Goldentail Moray Eel, <i>Gymnothorax miliaris</i> | Muraenidae | A |
| 1181 | 65p | Brown Moray Eel, <i>Gymnothorax unicolor</i> | Muraenidae | A |
| 1182 | £1.60 | Spotted Moray Eel, <i>Gymnothorax moringa</i> | Muraenidae | A |
| AUSTRALIAN ANTARCTIC TERR. | | | | |
| 2017 March 7 (East Antarctic Deep Sea Creatures) (SS/4) | | | | |
| L210 | \$2 | U/I fish (Plunder?) <i>Pogonophryne</i> ssp. (in foreground) | Arteidraconidae | U B |
| L211a | | Horiz pair (Sc#L210-11) | | |
| L211b | | SS/4 (Sc#L208-11) | | |
| BRITISH ANTARCTIC TERR. | | | | |
| 2016 November 13 (Marine Life Antarctic Ocean Zones) (Set/4, MS/12) | | | | |
| 522 | 66p | Antarctic Silverfish, <i>Pleuragramma antarctica</i> | Nototheniidae | A |
| 524 | £1.01 | Anglerfish, <i>Oneirodes notius</i> | Oneirodidae | A |
| 526a | 66p | Antarctic Silverfish, <i>Pleuragramma antarctica</i> (diff.) | Nototheniidae | A |
| 526d | 66p | Antarctic Lanternfish, <i>Electrona antarctica</i> | Myctophidae | A |
| 526g | 66p | Anglerfish, <i>Oneirodes notius</i> (diff.) | Oneirodidae | A |
| 526i | 66p | Scaly (Boa) Dragonfish, <i>Stomias boa boa</i> | Stomiidae | A |
| 526j | 66p | Dogtooth Grenadier, <i>Cynomacurus piriei</i> | Macrouridae | A |
| CAPE VERDE | | | | |
| 2016 November 15 (WWF: Blue Shark) (Horiz strip/4) (Stylized) | | | | |
| 1014a | 60e | Blue Shark, <i>Prionace glauca</i> (swimming L) | Carcharhinidae | A S |
| 1014b | 60e | Same species (chasing squid) | | A S |
| 1014c | 60e | Same species (swimming R) | | A S |
| 1014d | 60e | Same species (two sharks & map) | | A S |
| ETHIOPIA | | | | |
| 2017 March 21 (Fish) (Set/4) (dated 2016) | | | | |
| 1849 | 5c | Nech asa (Ethiopian), <i>Labeobarbus macrophthalmus</i> | Cyprinidae | A |
| 1850 | 45c | Nech asa (Ethiopian), <i>Labeobarbus gorguari</i> | Cyprinidae | A |
| 1851 | 1b | Teravkoon-mokkparrak (Ethiopian), <i>Labeobarbus acutirustris</i> | Cyprinidae | A |
| 1852 | 5b | no Ethiopian common name, <i>Labeobarbus osseensis</i> | Cyprinidae | A |

| | | | | |
|----------------------------------------------|-------|----------------------------------------------------------------------|-----------------|-----|
| FRENCH POLYNESIA | | 2017 May 5 (Underwater Scenes) (Set/4 & SS/4) | | |
| 1187 | 10fr | U/I ray (w/ woman lying on sea floor) | --- | U B |
| 1188 | 20fr | U/I school of fish (w/ diver) | --- | U B |
| 1189 | 80fr | U/I school of fish (w/ diver on sea floor) | --- | U B |
| 1190 | 100fr | Woman sitting on sea floor and ray | --- | U B |
| 1190a | | SS/4 (Sc#1187-90) | | |
| FRENCH SOUTHERN & ANTARCTIC TERR. | | 2017 January 2 (Tuna Fishing) (SS/2) | | |
| 565a | 44c | Albacore Tuna, <i>Thunnus alalunga</i> | Scombridae | A |
| PERU | | 2017 February 1 (Fish) (Set/4) (dated 2016) | | |
| 1917 | 6.50s | Pirapitinga (Cachama), <i>Piaractus brachypomus</i> | Serrasalminidae | A |
| 1918 | 6.50s | Burrito Grunt, <i>Anisotremus interruptus</i> | Haemulidae | A |
| 1919 | 6.50s | Twospot Lebiasina, <i>Lebiasina bimaculata</i> | Lebiasinidae | A |
| 1920 | 6.50s | no common name (armored catfish), <i>Panaque schaeferi</i> | Loricariidae | A |
| RUSSIA | | 2017 June 29 (Coat of Arms: Azov) | | |
| 7831 | 16r | Stylized fish (Sturgeon sp?) | Acipenseridae | S C |
| SINGAPORE | | 2016 October 19 (Festival) (Set/8 & Bklt/10) | | |
| 1802 | (30c) | Stylized Carp/Koi (perf 14¼) | --- | S C |
| 1810 | (30c) | Stylized Carp/Koi (die cut 9¾) (s/a) | --- | S C |
| 1810a | | Bklt/10 (Sc#1810) | | |
| SOLOMON ISLANDS | | 2016 December 1 (Fish) (Sheet/36) | | |
| 2169a | \$7 | Vermiculated Angelfish, <i>Chaetodontoplus mesoleucus</i> | Pomacanthidae | A |
| 2169b | \$7 | Fire Clownfish, <i>Amphiprion melanopus</i> | Pomacentridae | A |
| 2169c | \$7 | Barhead Damsel, <i>Neoglyphidodon thoracotaeniatus</i> | Pomacentridae | A |
| 2169d | \$7 | Royal Dottyback, <i>Pictichromis paccagnellae</i> | Pseudochromidae | A |
| 2169e | \$7 | Chocolate Hind, <i>Cephalopholis boenak</i> | Serranidae | A |
| 2169f | \$7 | Bicolor Angelfish, <i>Centropyge bicolor</i> | Pomacanthidae | A |
| 2169g | \$7 | Lantern Toby, <i>Canthigaster epilampra</i> | Tetraodontidae | A |
| 2169h | \$7 | Manybar Goatfish, <i>Parupeneus multifasciatus</i> | Mullidae | A |
| 2169i | \$7 | Reticulate Dascyllus, <i>Dascyllus reticulatus</i> | Pomacentridae | A |
| 2169j | \$7 | Yellow Clownfish, <i>Amphiprion sandaracinos</i> | Pomacentridae | A |
| 2169k | \$7 | Golden Damsel, <i>Amblyglyphidodon aureus</i> | Pomacentridae | A |
| 2169l | \$7 | Redback Sand Tilefish, <i>Hoplostethus marcosi</i> | Malacanthidae | A |
| 2169m | \$7 | Black-bar Chromis, <i>Chromis retrofasciata</i> | Pomacentridae | A |
| 2169n | \$7 | Flaming (Flame) Angel, <i>Centropyge loriculus</i> | Pomacanthidae | A |
| 2169o | \$7 | Blacktip Grouper, <i>Epinephelus fasciatus</i> | Serranidae | A |
| 2169p | \$7 | Exquisite Wrasse, <i>Cirrhilabrus exquisitus</i> | Labridae | A |
| 2169q | \$7 | Orange Angelfish, <i>Centropyge fisheri</i> | Pomacanthidae | A |
| 2169r | \$7 | Goldtail Demoiselle (Yellowtail Damsel), <i>Chrysiptera parasema</i> | Pomacentridae | A |
| 2169s | \$7 | White-freckled Surgeonfish, <i>Acanthurus maculiceps</i> | Acanthuridae | A |
| 2169t | \$7 | Red-lined Wrasse, <i>Halichoeres biocellatus</i> | Labridae | A |
| 2169u | \$7 | Five-lined Cardinalfish, <i>Cheilodipterus quinquelineatus</i> | Apogonidae | A |
| 2169v | \$7 | Eastern Smooth Boxfish, <i>Anoplocapros inermis</i> | Aracanidae | A |
| 2169w | \$7 | Splitlevel Hogfish, <i>Bodianus mesothorax</i> | Labridae | A |
| 2169x | \$7 | Spot-nape Butterflyfish, <i>Chaetodon oxycephalus</i> | Chaetodontidae | A |
| 2169y | \$7 | Siamese Fighting Fish, <i>Betta splendens</i> | Osphronemidae | A |
| 2169z | \$7 | Bluestripe Snapper, <i>Lutjanus kasmira</i> | Lutjanidae | A |
| 2169aa | \$7 | Clown Anemonefish, <i>Amphiprion ocellaris</i> | Pomacentridae | A |
| 2169ab | \$7 | Yellowfin Damsel, <i>Chrysiptera flavipinnis</i> | Pomacentridae | A |
| 2169ac | \$7 | Pennant Coralfish, <i>Heniochus acuminatus</i> | Chaetodontidae | A |
| 2169ad | \$7 | Yellow Angelfish, <i>Centropyge heraldi</i> | Pomacanthidae | A |

SOLOMON ISLANDS (continued)

| | | | | |
|--------|-----|----------------------------------------------------------|----------------|---|
| 2169ae | \$7 | Doubletooth Soldierfish, <i>Myripristis hexagona</i> | Holocentridae | A |
| 2169af | \$7 | New Guinea Wrasse, <i>Anampses neoguinaicus</i> | Labridae | A |
| 2169ag | \$7 | Blackstriped Angelfish, <i>Genicanthus lamarck</i> | Pomacanthidae | A |
| 2169ah | \$7 | Highfin Coralfish, <i>Coradion altivelis</i> | Chaetodontidae | A |
| 2169ai | \$7 | Black-tail Sergeant, <i>Abudefduf lorenzi</i> | Pomacentridae | A |
| 2169aj | \$7 | Fourspot Butterflyfish, <i>Chaetodon quadrimaculatus</i> | Chaetodontidae | A |

2016 December 12 (Dugongs) (MS/4 & SS/1)

| | | | | |
|-------|---------|----------------------------|-----|-----|
| 2171b | \$12 | U/I fish (eaten by dugong) | --- | U C |
| 2196 | SS \$40 | Two U/I fish (with dugong) | --- | U C |

2017 May 15 (Fish) (MS/4 & SS/1)

| | | | | |
|-------|---------|-----------------------------------------------------------------|-----------------|---|
| 2297a | \$10 | Redtail Surgeonfish (Achilles Tang), <i>Acanthurus achilles</i> | Acanthuridae | A |
| 2297b | \$10 | Orangespot Surgeonfish, <i>Acanthurus olivaceus</i> | Acanthuridae | A |
| 2297c | \$10 | Bird Wrasse, <i>Gomphosus varius</i> | Labridae | A |
| 2297d | \$10 | Rockmover Wrasse, <i>Novaculichthys taeniourus</i> | Labridae | A |
| 2312 | SS \$40 | Red (Red-bellied) Piranha, <i>Pygocentrus nattereri</i> | Serrasalminidae | A |
| | Margin | UR: Yellow Tang, <i>Zebrasoma flavescens</i> | Acanthuridae | Z |
| | | MR: Chocolate Surgeonfish, <i>Acanthurus pyroferus</i> | Acanthuridae | Z |
| | | Bot: Mahi-mahi, <i>Coryphaena hippurus</i> | Coryphaenidae | Z |

SOUTH AFRICA**2016 October 21** (Biospheres) (MS/6)

| | | | | |
|-------|---------|----------------------------------------|-----|---|
| 1558c | (3.60r) | Line drawing of fish (Cape West Coast) | --- | S |
|-------|---------|----------------------------------------|-----|---|

SURINAME**2017 June 14** (Fish) (Block/12)

| | | | | |
|-------|--------|------------------------------------------------|-------------|---|
| 1508a | \$1.50 | Snail Bullhead, <i>Ameiurus brunneus</i> | Ictaluridae | A |
| 1508b | \$1.75 | White Catfish, <i>Ameiurus catus</i> | Ictaluridae | A |
| 1508c | \$2.50 | Black Bullhead, <i>Ameiurus melas</i> | Ictaluridae | A |
| 1508d | \$2.75 | Spotted Bullhead, <i>Ameiurus serracanthus</i> | Ictaluridae | A |
| 1508e | \$3.50 | Channel Catfish, <i>Ictalurus punctatus</i> | Ictaluridae | A |
| 1508f | \$3.75 | Stonecat, <i>Noturus flavus</i> | Ictaluridae | A |
| 1508g | \$4.50 | Rainbow Trout, <i>Oncorhynchus mykiss</i> | Salmonidae | A |
| 1508h | \$4.75 | Flathead Catfish, <i>Pylodictis olivaris</i> | Ictaluridae | A |
| 1508i | \$5.50 | Brook Trout, <i>Salvelinus fontinalis</i> | Salmonidae | A |
| 1508j | \$5.75 | Dolly Varden, <i>Salvelinus malma</i> | Salmonidae | A |
| 1508k | \$6.50 | Widemouth Blindcat, <i>Satan eurystomus</i> | Ictaluridae | A |
| 1508l | \$7.25 | Arctic Grayling, <i>Thymallus arcticus</i> | Salmonidae | A |

TANZANIA**2014 March 25** (Marine Life) (2ea MS/6 & MS/4)

| | | | | |
|-------|-----------|-----------------------------------------------|----------------|---|
| 2743a | 1400sh | Stylized Flying Fish | Exocoetidae | S |
| 2743b | 1400sh | Stylized Sailfish | Istiophoridae | S |
| 2743e | 1400sh | Dusky Shark, <i>Carcharhinus obscurus</i> | Carcharhinidae | A |
| 2743 | | MS/6 (Sc#2743a-f) (perf 13¼) | | |
| 2744c | 1600sh | Smooth Trunkfish, <i>Lactophrys triqueter</i> | Ostraciidae | A |
| 2744 | | MS/6 (Sc#2744a-f) (perf 13¼) | | |
| 2745b | SS 1800sh | Lined Seahorse, <i>Hippocampus erectus</i> | Syngnathidae | A |
| 2745 | | MS/4 (Sc#2745a-d) (perf 14) | | |

TONGA**2016 March 2** (Marine Life & Birds) (Set/12)

| | | | | |
|------|---------|--------------------------------------------------------------|----------------|---|
| 1304 | 2pa | Yellowfin Goatfish, <i>Mulloidichthys vanicolensis</i> | Mullidae | A |
| 1307 | 4.20pa | Whale Shark, <i>Rhincodon typus</i> | Rhincodontidae | A |
| 1309 | 6.70pa | Freckled (Blackside) Hawkfish, <i>Paracirrhites forsteri</i> | Cirrhitidae | A |
| 1311 | 11.70pa | Tiger Shark, <i>Galeocerdo cuvier</i> | Carcharhinidae | A |

| | | | | |
|--------------------------------|--------|-----------------------------------------------------------------------|----------------|-----|
| TONGA (Niuafu'ou) | | 2016 March 2 (Marine Life & Birds Type of Tonga 2016) (Set/12) | | |
| 348 | 1pa | Gray (Blacktail) Reef Shark, <i>Carcharhinus amblyrhynchos</i> | Carcharhinidae | A |
| 354 | 4.20pa | Whale Shark, <i>Rhincodon typus</i> | Rhincodontidae | A |
| 355 | 5pa | Tiger Shark, <i>Galeocerdo cuvier</i> | Carcharhinidae | A |
| TUVALU | | 2016 April 1 (WWF: Common Thresher Shark) (Strip/4 & SS/8) | | |
| 1363a | \$1.50 | Common Thresher Shark, <i>Alopias vulpinus</i> (head facing R) | Alopiidae | A |
| 1363b | \$1.50 | Same species (swimming R) | | A |
| 1363c | \$1.50 | Same species (swimming up) | | A |
| 1363d | \$1.50 | Same species (swimming forward) | | A |
| 1363 | | Strip/4 (Sc#1364a-d) | | |
| 1363e | | SS/8 (2ea Sc#1363a-d) | | |
| UNITED NATIONS | | 2017 May 11 (Endangered Species) (Block/4) | | |
| 1163 | \$1.15 | Thresher Shark, <i>Alopias</i> sp. | Alopiidae | U A |
| 1164 | \$1.15 | Clarion Angelfish, <i>Holacanthus clarionensis</i> | Pomacanthidae | A |
| 1165a | | Block/4 (Sc#1162-65) | | |
| UNITED NATIONS (Geneva) | | 2017 May 11 (Endangered Species) (Block/4) | | |
| 633 | 1.50fr | Ray, <i>Mobula</i> sp. | Mobulidae | U A |
| UNITED STATES | | 2017 July 26 (Sharks) (Vert strip/5) | | |
| 5223 | 49c | Mako (Shortfin) Shark, <i>Isurus oxyrinchus</i> | Lamnidae | A |
| 5224 | 49c | Whale Shark, <i>Rhincodon typus</i> | Rhincodontidae | A |
| 5225 | 49c | Thresher (Pelagic) Shark, <i>Alopias pelagicus</i> | Alopiidae | A |
| 5226 | 49c | Hammerhead (Scalloped) Shark, <i>Sphyrna lewini</i> | Sphyrnidae | A |
| 5227 | 49c | Great White (White) Shark, <i>Carcharodon carcharias</i> | Lamnidae | A |
| 5227a | | Vert strip/5 (Sc#5223-27) | | |
| VIRGIN ISLANDS | | 2017 July 5 (Marine Life) (Set/12) | | |
| 1182 | \$5 | Spotted Eagle Ray, <i>Aetobatus narinari</i> | Myliobatidae | A |
| ZIMBABWE | | 2017 January 30 (Recreational Fishing) (Set/4 & SS/4) | | |
| 1233 | 40c | U/I Tiger fish, <i>Hydrocynus goliath</i> (?) | Alestidae | U A |
| 1234 | 75c | Largemouth Bass, <i>Micropterus salmoides</i> | Centrarchidae | A |
| 1236a | | SS/4 (Sc#1233-36) (imperf) | | |



ENTOMOLOGY

Editor

Donald P. Wright, Jr., BU243
and José Reis



New Listings

| Scott# | Denom | Common Name/Scientific Name | Family/Subfamily | Code |
|-----------------------------------------------------------------------------------------------------------------|---------|-------------------------------------------------------------------------|----------------------|------|
| BELARUS 2016 December 8 (70th anniv. UNICEF) (Single) | | | | |
| 1023 | (1.26r) | Girl with butterfly net | | C S |
| BELGIUM 2017 June 12 (Medical Advances) (MS/5) | | | | |
| Alphons Vandoninck is the developer of the mosquito repellent spray can. | | | | |
| 2827c | (€1.13) | U/I Mosquito (w/ Alphons Vandoninck portrait) | Culicidae | U |
| 2017 October 21 (Nature in High Fens Reserve) (SS/10) | | | | |
| g | (74c) | Bog Hawker or Subarctic Darner, <i>Aeshna subarctica</i> Walker | AES, Aeshninae | A |
| i | (74c) | Marsh Fritillary, <i>Euphydryas aurinia</i> Rottemburg | NYM, Heliconiinae | A |
| BHUTAN 2016 October 16 (National Flora & Fauna) (MS/4) | | | | |
| 1556c | 30nu | Ludlow's Bhutan Swallowtail, <i>Bhutanitis ludlowi</i> Gabriel | PAP, Parnassiinae | A |
| CAYMAN ISLANDS 2017 October 12 (Cayman Islands Moths) (Set/4) | | | | |
| | 20c | Faithful Beauty, <i>Composia fidelissima</i> Herrich-Schaeffer | ARC, Pericopinae | A |
| | 25c | Cayman Clearwing Wasp Moth, <i>Eunomia caymanensis</i> Hampson | ARC, Ctenuchinae | A |
| | \$1.60 | White-lined Sphinx, <i>Hyles lineata</i> Fabr. (with pupa) | SPH, Macroglossinae | A |
| | \$2 | Gaudy Sphinx, <i>Eumorpha labruscae</i> L. | SPH, Macroglossinae | A |
| ECUADOR 2017 March 31 (Ants of Ecuador) (2ea Bklt/8) (new data) [Vol. 66(3)] | | | | |
| 2196a | 25c | Harvester Ant, <i>Atta cephalotes</i> L. | FOR, Myrmicinae | A |
| 2196b | 25c | <i>Eciton hamatum</i> Fabr. | FOR, Dorylinae | A |
| 2196c | 50c | <i>Daceton armigerum</i> Latreille | FOR, Myrmicinae | A |
| 2196d | 50c | <i>Acanthoponera minor</i> Forel | FOR, Heteroponerinae | A |
| 2196e | 75c | Hairy Ant, <i>Ectatomma tuberculatum</i> Olivier | FOR, Ectatomminae | A |
| 2196f | 75c | a Jumping Ant, <i>Gigantiops destructor</i> Fabr. | FOR, Formicinae | A |
| 2196g | \$1 | Hairy Panther Ant, <i>Neoponera villosa</i> Fabr. | FOR, Ponerinae | A |
| 2196h | \$1 | a Turtle Ant, <i>Cephalotes atratus</i> L. | FOR, Myrmicinae | A |
| 2197a | 25c | a Parachute Ant, <i>Cephalotes spinosus</i> Mayr | FOR, Myrmicinae | A |
| 2197b | 25c | a Trap-Jaw Ant, <i>Odontomachus hastatus</i> Fabr. | FOR, Ponerinae | A |
| 2197c | 50c | Carrot Ant, <i>Pheidole xanthogaster</i> Wilson | FOR, Myrmicinae | A |
| 2197d | 50c | Lemon Ant, <i>Myrmelachista ruskii</i> Forel | FOR, Formicinae | A |
| 2197e | 75c | Lattke's Ant, <i>Leptogenys pucuna</i> Lattke | FOR, Ponerinae | A |
| 2197f | 75c | an Army Ant, <i>Eciton rapax</i> Smith | FOR, Dorylinae | A |
| 2197g | \$1 | Bullet Ant, <i>Paraponera clavata</i> Fabr. | FOR, Paraponerinae | A |
| 2197h | \$1 | Golden Carpenter Ant, <i>Camponotus sericeiventris</i> Guerin-Ménéville | FOR, Formicinae | A |
| GHANA 2017 July 21 (Animals of the World) (MS/4) | | | | |
| c | 12ce | Malachite, <i>Siproeta stelenes</i> L. | NYM, Nymphalinae | A |
| GREAT BRITAIN 2017 September 14 (100th anniv. Ladybird Books) (4ea se-tenant pairs) | | | | |
| Each book cover depicted on the stamps has a small imprint of the Ladybird logo, which is a 7-Spotted Ladybird. | | | | |
| [all pairs] | | 7-Spotted Ladybird, <i>Coccinella septempunctata</i> L. | COC, Coccinellinae | C |
| a | (64p) | Small Tortoiseshell, <i>Nymphalis urticae</i> L. | NYM, Nymphalinae | C |
| a | £1.40 | Children making toy caterpillar | Lepidoptera | S C |

| | | | | |
|-------------------|-----------|-----------------------------------------------------------------------------|--------------------------|-----|
| GRENADA | | 2017 February 28 (Bats) (MS/6 & SS/2) | | |
| a | Margin | LL: Long-Tailed Skipper, <i>Urbanus proteus</i> L. | HES, Pyrginae | Z |
| | SS \$7.50 | Long-Tailed Skipper, <i>Urbanus proteus</i> L. | HES, Pyrginae | A |
| HONDURAS | | 2016 November 4 (60th anniv. Francisco Morazan University) (Set/6) | | |
| C1388 | 15L | Stylized Butterflies (w/ Morazan portrait & book) | Lepidoptera | S C |
| HONG KONG | | 2017 May 16 (Outdoor Fun) (Set/6 & MS/6) | | |
| n/a | \$5 | Stylized Butterflies (drawing w/ photographer) | Lepidoptera | S C |
| HUNGARY | | 2017 July 3 (Owls) (SS/1) | | |
| | SS 600fo | Three U/I flying insects (moths?) (with Scops Owl) | Lepidoptera | U B |
| | Margin | UR: U/I Grasshopper | Orthoptera | U Z |
| | | Ctr: U/I Butterfly (tiny) | LYC, Theclinae | U Z |
| | | LR: U/I Beetle | Cerambycidae | U Z |
| | | Top: Eyed Hawkmoth, <i>Smerinthus ocellatus</i> L. | SPH, Smerinthinae | Z |
| JAPAN | | 2017 August 18 (Traditional Designs) (MS/10) | | |
| a | 62¥ | Three Stylized Butterflies | Lepidoptera | S |
| e | 62¥ | Five Stylized Dragonflies | Odonata | S |
| | Margin | MS/10 (2ea Sc#a-e) LR: Stylized Butterfly silhouettes | Lepidoptera | S Z |
| JERSEY | | 2017 September 1 (Links with China) (MS/6 & SS/2) | | |
| a | 49p | Black-Veined White, <i>Aporia crataegi</i> L. (also in SS/2) | PIE, Pierinae | A |
| b | 49p | Small Tortoiseshell, <i>Nymphalis urticae</i> L. | NYM, Nymphalinae | A |
| c | 49p | Old World Swallowtail, <i>Papilio machaon</i> L. (also in SS/2) | PAP, Papilioninae | A |
| d | 49p | Purple Emperor, <i>Apatura iris</i> L. | NYM, Apaturinae | A |
| e | 49p | White Admiral, <i>Limenitis camilla</i> L. | NYM, Limenitidinae | A |
| f | 49p | Camberwell Beauty or Mourning Cloak, <i>Nymphalis antiopa</i> L. | NYM, Nymphalinae | A |
| | | 2017 October 3 (100th anniv. Jersey Beekeepers Assn.) (Set/6 & SS/1) | | |
| | 49p | Western Honeybee, <i>Apis mellifera</i> L. (on flower) | API, Apinae | A |
| | 63p | Same species (four bees on honeycomb) | API, Apinae | A |
| | 73p | Same species (with hive and smoker) | API, Apinae | B |
| | 79p | Beekeeper & honeycomb at hive | | R |
| | 90p | Removing honey from comb | | R |
| | £1.07 | Honey jar | | R |
| | SS £2 | Western Honeybee, <i>Apis mellifera</i> L. (hexagonal) (on comb) | API, Apinae | A |
| LIBERIA | | 2017 April 14 (Animals of the World) (MS/4) | | |
| b | \$180 | Western Honeybee, <i>Apis mellifera</i> L. | API, Apinae | A |
| d | \$180 | Monarch, <i>Danaus plexippus</i> L. | NYM, Danainae | A |
| MADAGASCAR | | 2016 (Insects) (MS/3 & SS/1) | | |
| a | 2500m | Rainbow Bush Locust, <i>Phymateus saxosus</i> Coquerel | PYRG, Pyrgomorphae | A |
| b | 2500m | <i>Agaeus bicolor</i> Cochan | PEN, Pentatominae | A |
| c | 2500m | European Mantis, <i>Mantis religiosa</i> L. | MAN, Mantidae | A |
| | Margin | UR: Rainbow Bush Locust, <i>Phymateus saxosus</i> Coquerel | PYRG, Pyrgomorphae | Z |
| | SS 8600m | Madagascar Eggfly, <i>Hypolimnas dexithea</i> Hewitson | NYM, Nymphalinae | A |
| | Margin | LL: U/I Insect | | U Z |
| | | Bot: U/I Insect | | U Z |
| | | UR: <i>Charaxes cowani</i> Butler | NYM, Charaxinae | Z |
| | | LR: <i>Trachelophorus</i> sp. | Attelabidae, Attelabinae | Z |

| | | | | |
|---------------------------|-----------|-----------------------------------------------------------------------|---------------------------------|-----|
| MALI | | 2016 (Butterflies) (MS/2 & SS/1) | | |
| a | 1500fr | Small Emperor Moth, <i>Saturnia pavonia</i> L. (round stamp) | SAT, Saturniinae | A |
| b | 1500fr | Peacock Pansy, <i>Junonia almana</i> L. (round stamp) | NYM, Nymphalinae | A |
| | Margin | LL: Purple Emperor, <i>Apatura iris</i> L. | NYM, Apaturinae | Z |
| | | UR: Luna Moth, <i>Actias luna</i> L. | SAT, Saturniinae | Z |
| | | MR: <i>Neptis</i> sp. | NYM, Limenitidinae | Z |
| | SS 1500fr | Alpine Black Swallowtail, <i>Papilio maackii</i> Ménétries | PAP, Papilioninae | A |
| | Margin | LL: Great Mormon, <i>Papilio memnon agenor</i> L. | PAP, Papilioninae | Z |
| | | MR: Spear-Winged Cattle Heart, <i>Parides neophilus</i> Geyer | PAP, Papilioninae | Z |
| | | LR: Purple Emperor, <i>Apatura iris</i> L. | NYM, Apaturinae | Z |
| NEVIS | | 2017 April 14 (Animals of the World) (MS/4 & SS/1) | | |
| b | \$4 | <i>Heliconius cydno chioneus</i> Bates | NYM, Heliconiinae | A |
| | SS \$15 | Slender-legged Camel Cricket, <i>Ceuthophilus gracilipes</i> Haldeman | Raphidophoridae, Ceuthophilinae | A |
| NETHERLANDS | | 2017 (Post & Go Automat Stamps) (Pair) | | |
| | (78c) | Adonis Blue, <i>Polyommatus bellargus</i> Rottemburg | LYC, Polyommatinae | A |
| | | 2017 March 27 (Special Moments) (MS/10) | | |
| f | (78c) | Three stylized Butterflies (also in margin) | Lepidoptera | S |
| | | 2017 July 17 (Museum Voorlinden) (MS/10+10 tabs) | | |
| e | (78c) | <i>Bombus</i> sp. (half on stamp & half on tab) | API, Apinae | U B |
| PITCAIRN ISLAND | | 2017 October 25 (Transverse Ladybird) (Set/2 & SS/2) | | |
| | \$2.10 | Transverse Ladybird, <i>Coccinella transversalis</i> Fabr. | COC, Coccinellinae | A |
| | \$3 | Same species (on plant) | | A |
| a | SS \$1 | Same species (wings open) | | A |
| b | SS \$4 | Same species (wing-case open) | | A |
| | Margin | UR: Same species | | Z |
| PORTUGAL | | 2017 October 20 (ATM Stamps) (Set/3) | | |
| Values printed on demand. | | | | |
| a | n/a | Large Emperor Moth, <i>Saturnia pyri</i> Denis & Schiffermüller | SAT, Saturniinae | A |
| b | n/a | Small Elephant Hawkmoth, <i>Deilephila porcellus</i> L. | SPH, Macroglossinae | A |
| c | n/a | <i>Atlantarctica tigrina</i> Villers | ARC, Arctiinae | A |
| SINGAPORE | | 2017 April 26 (Kingfishers) (set/4) | | |
| | 90c | U/I Beetle (in kingfisher's beak) | Carabidae | U C |
| SLOVENIA | | 2017 September 29 (Ladybirds) (Set/3 & SS/1) | | |
| | €1 | 22-Spotted Ladybird, <i>Psyllobora vigintiduopunctata</i> L. | COC, Coccinellinae | A |
| | €1.15 | Eyed or Pine Ladybird, <i>Anatis ocellata</i> L. | COC, Coccinellinae | A |
| | €1.29 | Striped Ladybird, <i>Myzia oblongoguttata</i> L. | COC, Coccinellinae | A |
| | SS €1.26 | 7-Spotted Ladybird, <i>Coccinella septempunctata</i> L. | COC, Coccinellinae | A |
| SURINAME | | 2017 July 12 (Butterflies) (Block/12+4 labels) | | |
| 1509a | \$1.50 | Orange-Washed or Cocala Sister, <i>Adelpha cocala</i> Cramer | NYM, Limenitidinae | A |
| 1509b | \$1.75 | Tropical Leafwing, <i>Anaea troglodyta aidea</i> Guérin-Méneville | NYM Charaxinae | A |
| 1509c | \$2.50 | Bordered Patch, <i>Chlosyne lacinia</i> Geyer | NYM, Nymphalinae | A |
| 1509d | \$2.75 | Mosaic, <i>Colobura dirce</i> L. | NYM, Nymphalinae | A |
| 1509e | \$3.50 | Soldier, <i>Danaus eresimus</i> Cramer | NYM, Danainae | A |
| 1509f | \$3.75 | Elis Emperor, <i>Doxocopa elis</i> C&R Felder (also on label) | NYM, Apaturinae | A |
| 1509g | \$4.50 | Small-Eyed Sailor, <i>Dynamine artemisia glauca</i> Bates | NYM, Biblidinae | A |
| 1509h | \$4.75 | Zebra, <i>Heliconius charithonia</i> L. | NYM, Heliconiinae | A |

SURINAME (continued)

| | | | | |
|-------|--------|-----------------------------------------------------------------------|-------------------|---|
| 1509i | \$5.50 | Small Blue Grecian, <i>Heliconius sara</i> Fabr. | NYM, Heliconiinae | A |
| 1509j | \$5.75 | Schaus' Swallowtail, <i>Papilio aristodemus ponceanus</i> Schaus | PAP, Papilioninae | A |
| 1509k | \$6.50 | Broad-Banded Swallowtail, <i>Papilio astyalus</i> Godart (also label) | PAP, Papilioninae | A |
| 1509l | \$7.25 | King or Thoas Swallowtail, <i>Papilio thoas</i> L. (also on label) | PAP, Papilioninae | A |

UNITED NATIONS**2017 September 21** (International Day of Peace) (Set/2)

| | | | | |
|------|--------|---------------------|------------|---|
| 1173 | \$1.15 | Four stylized Moths | Arctiidae? | S |
|------|--------|---------------------|------------|---|

WALLIS & FUTUNA ISLANDS**2016** (Christmas) (Single)

| | | | | |
|-------|--|----------------------------------------------|---------------|---|
| 100fr | | Chestnut tiger, <i>Parantica sita</i> Kollar | NYM, Danainae | C |
|-------|--|----------------------------------------------|---------------|---|

Beyond the Catalog

(Issues of dubious validity)

CENTRAL AFRICA**2017 September 22** (Red Cross Malaria) (MS/4 & SS/1) (CA17604a–b)

| | | | | |
|-----------|-----|-------------------------------------------------------------|------------------|---|
| Margin | UL: | Western Malaria Mosquito, <i>Anopheles freeborni</i> Aitken | CUL, Anophelinae | Z |
| SS 3300fr | | Western Malaria Mosquito, <i>Anopheles freeborni</i> Aitken | CUL, Anophelinae | B |

CHAD**2017 July 10** (Darwin) (MS/4) (TCH17302a)

| | | | | |
|--------|-------|--------------------------------------------------------|----------------|-----|
| b | 800fr | Darwin's Beetle, <i>Chiasognathus grantii</i> Stephens | LUC, Lucaninae | B |
| Margin | LR: | U/I Beetle | Scarabaeidae | U Z |
| | Bot: | African Monarch, <i>Danaus chrysippus</i> L. | NYM, Danainae | Z |

CONGO REPUBLIC (South Kasai) 1961 (New data)

| | | | | |
|---------|--|---------------------------------------------------|------------------|---|
| 1fr+5fr | | <i>Anopheles</i> sp. (Leopard stamp ovpt & surch) | CUL, Anophelinae | B |
|---------|--|---------------------------------------------------|------------------|---|

GABON**2012** (Butterflies of the World) (3ea SS/1)

Each SS has one heart-shaped stamp and the same set of species depicted in its margin.

| | | | | |
|-----------|------|----------------------------------------------------------------------------|--------------------|-----|
| SS 2000fr | | Black Jezebel, <i>Delias nigrina</i> Fabr. (Cap: <i>Pieris nigrina</i>) | PIE, Pierinae | A |
| SS 2000fr | | <i>Sea sophronia</i> Godart (Cap: <i>Vanessa sophronia</i>) | NYM, Nymphalinae | A |
| SS 2000fr | | Small Emperor Moth, <i>Saturnia pavonia</i> L. (Cap: <i>Bombyx petit</i>) | SAT, Saturniinae | A |
| Margin | UL: | Gold-banded Forester, <i>Euphaedra neophron</i> Hopffer | NYM, Limenitidinae | Z |
| | ML: | Polyphemus Moth, <i>Antheraea polyphemus</i> Cramer | SAT, Saturniinae | Z |
| | LL: | U/I Butterfly | Lepidoptera | U Z |
| | Bot: | U/I Moth | Lepidoptera | U Z |
| | UR: | U/I Butterfly | Nymphalidae | U Z |
| | MR: | <i>Heliconius</i> sp. | NYM, Heliconiinae | Z |
| | LR: | U/I Butterfly | Lepidoptera | U Z |

2012 (Butterflies of the World) (3ea SS/1)

Each SS has one heart-shaped stamp and the same set of species depicted in its margin.

| | | | | |
|-----------|----------|------------------------------------------------------|-------------------|-----|
| SS 2000fr | | <i>Cethosia lamarckii</i> Godart | NYM, Heliconiinae | A |
| SS 2000fr | | Regal Fritillary, <i>Speyeria idalia</i> Drury | NYM, Heliconiinae | A |
| SS 2000fr | | Spanish Festoon, <i>Zerynthia rumina</i> L. | PAP, Parnassiinae | A |
| Margin | UL: | U/I Skipper Butterfly | Hesperiidae | U Z |
| | ML: | Caribbean Buckeye, <i>Junonia evarete</i> Cramer | NYM, Nymphalidae | Z |
| | LL & ML: | Canopus Swallowtail, <i>Papilio fuscus</i> Goeze | PAP, Papilioninae | Z |
| | Ctr: | Discrete Chaperon, <i>Cymbalophora pudica</i> | ARC, Arctiinae | Z |
| | UR: | Marbled White, <i>Melanargia galathea</i> L. | NYM, Satyrinae | Z |
| | LR: | <i>Heliconius</i> sp. | NYM, Heliconiinae | Z |
| | LR: | Eastern Tiger Swallowtail, <i>Papilio glaucus</i> L. | PAP, Papilioninae | Z |

GUINEA**2017 August 25** (Butterflies) (MS/4 & SS/1) (GU17406a–b)

| | | | | |
|---|------------|-----------------------------------------------------------------------------|--------------------|---|
| a | 12500fr | Purple Emperor, <i>Apatura iris</i> L. | NYM, Apaturinae | A |
| b | 12500fr | Malay Lacewing, <i>Cethosia hypsea hypsina</i> C&R Felder | NYM, Heliconiinae | A |
| c | 12500fr | Spanish Festoon, <i>Zerynthia rumina</i> L. | PAP, Parnassiinae | A |
| d | 12500fr | Western Blue Beauty, <i>Salamis cytora</i> Doubleday & Hewitson | NYM, Nymphalinae | A |
| | SS 50000fr | <i>Morpho helenor</i> Cramer | NYM, Morphinae | A |
| | Margin | UL: Eastern Red Lacewing, <i>Cethosia cydippe</i> L. | NYM, Heliconiinae | Z |
| | | LL: Janetta Forester, <i>Euphaedra janetta</i> Butler (r) | NYM, Limenitidinae | Z |
| | | UR: Janetta Forester, <i>Euphaedra janetta</i> Butler (v) | NYM, Limenitidinae | Z |
| | | LR: Old World Swallowtail, <i>Papilio machaon</i> L. (Cap: <i>rutulus</i>) | PAP, Papilioninae | Z |

2017 August 25 (Bee-eaters) (MS/4) (GU17410a)

| | | | | |
|---|---------|--------------------------------|---------|-----|
| a | 12500fr | U/I Bee (in bird's beak) | Apidae | U C |
| d | 12500fr | U/I Dragonfly (in bird's beak) | Odonata | U C |

2017 August 25 (Bees & Orchids) (MS/4 & SS/1) (GU17420a–b)

| | | | | |
|---|------------|---------------------------------------------------------------------------|-------------|---|
| a | 12500fr | Western Honeybee, <i>Apis mellifera</i> L. (w/ <i>Barkeria skinneri</i>) | API, Apinae | B |
| b | 12500fr | Same species (w/ <i>Dendrobium chrysopterum</i>) | | B |
| c | 12500fr | Same species (w/ <i>D. ceraula</i>) | | B |
| d | 12500fr | Same species (w/ <i>D. pseudoglomeratum</i>) | | B |
| | SS 50000fr | Western Honeybee, <i>Apis mellifera</i> L. (also in LR margin) | API, Apinae | B |

MALDIVE ISLANDS**2017 September 26** (Butterflies) (MS/4 & SS/1) (MLD171008a–b)

| | | | | |
|---|--------|-------------------------------------------------------|-------------------|---|
| a | 22r | Large Silverstripe, <i>Childrena childreni</i> Gray | NYM, Heliconiinae | A |
| b | 22r | Io Moth, <i>Automeris io</i> Fabr. | SAT, Hemileucinae | A |
| c | 22r | Small Emperor Moth, <i>Saturnia pavonia</i> L. | SAT, Saturniinae | A |
| d | 22r | Dingy Purplewing, <i>Eunica monima</i> Stoll | NYM, Biblidinae | A |
| | Margin | Bot: Large, White, <i>Pieris brassicae</i> ♀ | PIE, Pierinae | Z |
| | SS 70r | Question Mark, <i>Nymphalis interrogationis</i> Fabr. | NYM, Nymphalinae | A |
| | Margin | LL: Pipevine Swallowtail, <i>Battus philenor</i> L. | PAP, Papilioninae | Z |
| | | LR: Yellow Tip, <i>Anthocharis scolymus</i> Butler | PIE, Pierinae | Z |

2017 September 26 (Bees) (MS/4 & SS/1) (MLD171009a–b)

| | | | | |
|---|--------|---------------------------------------------------------------|------------------|---|
| a | 22r | Red-Tailed Bumblebee, <i>Bombus lapidarius</i> L. | API, Apinae | A |
| b | 22r | Blue-Banded Bee, <i>Amegilla cingulata</i> Fabr. | API, Apinae | A |
| c | 22r | Texan Green Sweat Bee, <i>Agapostemon texanus</i> Cresson | HAL, Halictinae | A |
| d | 22r | Neon Cuckoo Bee, <i>Thyreus nitidulus</i> Fabr. | API, Xylocopinae | A |
| | Margin | Bot: Red-Tailed Bumblebee, <i>Bombus lapidarius</i> L. | API, Apinae | Z |
| | SS 60r | Gypsy's Cuckoo Bumblebee, <i>Bombus bohemicus</i> Seidl | API, Apinae | A |
| | Margin | LL: Red-Tailed Bumblebee, <i>Bombus lapidarius</i> L. | API, Apinae | Z |
| | | UR: Texan Green Sweat Bee, <i>Agapostemon texanus</i> Cresson | HAL, Halictinae | Z |
| | | Bot: Forest Cuckoo Bee, <i>Bombus sylvestris</i> Lepeletier | API, Apinae | Z |

NIGER**2017 September 11** (Bees) (MS/4 & SS/1) (NIG17414a–b)

| | | | | |
|---|-----------|----------------------------------------------------------------|-------------------|---|
| a | 800fr | European Wool Carder Bee, <i>Anthidium manicatum</i> L. | MEG, Megachilinae | A |
| b | 800fr | <i>Tetragonula carbonaria</i> Smith | API, Apinae | A |
| c | 800fr | Little Honeybee, <i>Apis florea</i> Fabr. | API, Apinae | A |
| d | 800fr | Texas Green Sweat Bee, <i>Agapostemon texanus</i> Cresson | API, Halictinae | A |
| | Margin | UR: Little Honeybee, <i>Apis florea</i> Fabr. (drawing) | API, Apinae | Z |
| | | LL: Texas Green Sweat Bee, <i>A. texanus</i> Cresson (drawing) | API, Halictinae | Z |
| | SS 3300fr | Blue-Banded Bee, <i>Amegilla cingulata</i> Fabr. | API, Apinae | A |
| | Margin | UL: Giant Honeybee, <i>Apis dorsata</i> Fabr. | API, Apinae | Z |
| | | Bot: Western Honeybee, <i>Apis mellifera</i> L. | API, Apinae | Z |
| | | UR: Western Honeybee, <i>Apis mellifera</i> L. (drawing) | API, Apinae | Z |

SIERRA LEONE**2017 September 29** (Bees) (MS/4 & SS/1) (SRL17901a–b)

| | | | | |
|---|------------|----------------------------------------------------------------------|-------------------|---|
| a | 9800le | Sugar Bag Bee, <i>Tetragonula carbonaria</i> Smith | API, Apinae | A |
| b | 9800le | Eastern Honeybee, <i>Apis cerana</i> Enderlein | API, Apinae | A |
| c | 9800le | Beechey's Bee, Royal Lady, <i>Melipona beecheii</i> Bennett | API, Apinae | A |
| d | 9800le | Uruçu (Big Bee), <i>Melipona scutellaris</i> Latreille | API, Apinae | A |
| | Margin | Bot: European Honeybees, <i>Apis mellifera mellifera</i> L. | API, Apinae | Z |
| | SS 40000le | Giant Honeybee, <i>Apis dorsata</i> Fabr. | API, Apinae | A |
| | Margin | LL: Western Honeybee, <i>Apis mellifera mellifera</i> L. | API, Apinae | Z |
| | | Ctr & UR: Alfalfa Leaf-cutting Bee, <i>Megachile rotundata</i> Fabr. | MEG, Megachilinae | Z |

2017 September 29 (Butterflies) (MS/4 & SS/1) (SRL17908a–b)

| | | | | |
|---|------------|------------------------------------------------------------------|-------------------|---|
| a | 9800le | Large Fairy Hairstreak, <i>Hypolycaena antifaunus</i> Westwood | LYC, Theclinae | A |
| b | 9800le | Figtrees Blue, <i>Myrina silenus</i> Fabr. | LYC, Theclinae | A |
| c | 9800le | Small Striped Swordtail, <i>Graphium policeses</i> Cramer | PAP, Papilioninae | A |
| d | 9800le | Smoky Orange Tip, <i>Colotis euippe</i> L. | PIE, Pierinae | A |
| | Margin | LL: White-Barred Acraea, <i>Acraea encedon</i> L. | NYM, Heliconiinae | Z |
| | | LR: African Giant Swallowtail, <i>Papilio antimachus</i> Drury ♂ | PAP, Papilioninae | Z |
| | SS 40000le | Western Scarlet, <i>Axiocerses harpax</i> Fabr. | LYC, Theclinae | A |
| | Margin | LL & LR: African Map, <i>Cyrestis camillus</i> Fabr. | NYM, Cyrestinae | Z |
| | | MR: Western Dotted Border, <i>Mylothris chloris</i> Fabr. | PIE, Pierinae | Z |

SOLOMON ISLANDS**2017 August 21** (Dinosaurs) (SS/1) (SLM17301b)

This extinct species is the largest known insect with a body 17 inches long and total wingspan of 28 inches.

| | | | | |
|--|--------|---------------------------------------------------------|-----------------------------|---|
| | Margin | LL: Griffinfly, <i>Meganeuropsis permiana</i> Carpenter | †Meganeuridae, Meganeurinae | Z |
| | | (Cap/Syn: <i>M. americana</i>) | | |

2017 August 21 (Bees) (MS/4 & SS/1) (SLM17304a–b)

| | | | | |
|---|---------|--------------------------------------------------------------|--------------------------|---|
| a | \$10 | Buff-Tailed Bumblebee, <i>Bombus terrestris</i> L. | API, Apinae | A |
| b | \$10 | Pantaloons Bee, <i>Dasypoda hirtipes</i> Fabr. | Melittidae, Dasypodainae | A |
| c | \$10 | Western Honeybee, <i>Apis mellifera</i> L. | API, Apinae | A |
| d | \$10 | Eastern Honeybee, <i>Apis cerana</i> Enderlein | API, Apinae | A |
| | SS \$40 | Broad-Banded Leaf-Cutter Bee, <i>Megachile latimanus</i> Say | MEG, Megachilinae | A |
| | Margin | Bot: Western Honeybee, <i>Apis mellifera</i> L. | API, Apinae | Z |
| | | UR: European Honeybee, <i>Apis mellifera mellifera</i> L. | API, Apinae | Z |

2017 September 4 (Mushrooms) (MS/4) (SLM17404a)

| | | | | |
|---|------|----------------------------------------------------------------|--------------------|---|
| a | \$10 | Monarch, <i>Danaus plexippus</i> L. | NYM, Danainae | B |
| d | \$10 | Magnificent Ladybird, <i>Coccinella magnifica</i> Redtenbacher | COC, Coccinellinae | B |



PALEONTOLOGY

Editor

Michael Kogan, BU1863

New Listings



| Scott# | Denom | Common Name/Scientific Name | Family | Code |
|----------------------------------------------------------------------------------|---------|------------------------------------------------------------|--------------------|------|
| GUINEA | | | | |
| 2017 August 25 (Prehistoric Water Animals) ^[1] (MS/4 & SS/1) | | | | |
| a | 12500fr | <i>Globidens dakotensis</i> | †Mosasauridae | A |
| b | 12500fr | <i>Plesiosaurus dolichodeirus</i> | †Plesiosauridae | A |
| c | 12500fr | <i>Tylosaurus proriger</i> | †Mosasauridae | A |
| d | 12500fr | <i>Peloneustes philarchus</i> | †Pliosauridae | A |
| SS 50000fr | | <i>Elasmosaurus platyurus</i> | †Elasmosauridae | A |
| Margin | UR: | <i>Ichthyosaurus communis</i> | †Ichthyosauridae | Z |
| | ML: | <i>Dunkleosteus terrelli</i> | †Dunkleosteidae | Z |
| | MR: | <i>Carcharocles megalodon</i> | †Otodontidae | Z |
| | LL: | <i>Mosasaurus hoffmannii</i> | †Mosasauridae | Z |
| | LR: | <i>Tusoteuthis longa</i> | †Muensterellidae | Z |
| NEPAL | | | | |
| 2017 September 22 (Prehistoric Mammals of Nepal) (Set/6) | | | | |
| a | 10r | <i>Pachyportax</i> | Bovidae | A |
| b | 10r | <i>Hipparion</i> | Equidae | A |
| c | 10r | <i>Dorcatherium</i> | Tragulidae | A |
| d | 10r | <i>Hemibos acuticornis</i> | Bovidae | A |
| e | 100r | <i>Brachypotherium perminese</i> | Rhinocerotidae | A |
| f | 200r | <i>Giraffokeryx punjabiensis</i> | Giraffidae | A |
| SIERRA LEONE | | | | |
| 2017 July 28 (Dinosaurs) ^[1] (MS/4 & SS/1) | | | | |
| a | 9800le | <i>Parksosaurus warreni</i> | †Thescelosauridae | A |
| b | 9800le | <i>Herrerasaurus ischigualastensis</i> | †Herrerasauridae | A |
| c | 9800le | <i>Cryolophosaurus ellioti</i> | Clade: Tetanurae | A |
| d | 9800le | <i>Plateosaurus engelhardti</i> | †Plateosauridae | A |
| SS 40000le | | <i>Ankylosaurus magniventris</i> | †Ankylosauridae | A |
| Margin | Bkgrd: | <i>Triceratops horridus</i> | †Ceratopsidae | Z |
| 2017 August 30 (135th anniv. Charles Darwin) ^[1] (MS/4 & SS/1) | | | | |
| a | 9800le | Portrait with Galápagos Islands | | R |
| b | 9800le | Darwin's finches | | R |
| c | 9800le | HMS <i>Beagle</i> | | R |
| d | 9800le | Portrait with Galápagos Tortoise, <i>Chelonoidis nigra</i> | Testudinidae | R |
| SS 40000le | | Portrait with manuscript | | R |
| 2017 September 29 (Dinosaurs) ^[1] (MS/4 & SS/1) | | | | |
| a | 9800le | <i>Herrerasaurus ischigualastensis</i> | †Herrerasauridae | A |
| b | 9800le | <i>Parasaurolophus walkeri</i> | †Hadrosauridae | A |
| c | 9800le | <i>Archaeopteryx lithographica</i> | †Archaeopterygidae | A |
| d | 9800le | <i>Gallimimus bullatus</i> | †Ornithomimidae | A |
| Margin | LL: | <i>Pteranodon longiceps</i> | †Pteranodontidae | Z |
| | LR: | <i>Stegosaurus stenops</i> | †Stegosauridae | Z |
| SS 40000le | | <i>Deinonychus antirrhopus</i> | †Dromaeosauridae | A |
| Margin | LL: | <i>Triceratops horridus</i> | †Ceratopsidae | Z |
| | LR: | <i>Tarbosaurus bataar</i> | †Tyrannosauridae | Z |

| | | | | |
|---------------------------------|------------|-----------------------------------------------------------------------------------|---------------------|---|
| SIERRA LEONE (continued) | | 2017 September 29 (Prehistoric Water Animals) ^[1] (MS/4 & SS/1) | | |
| a | 9800le | <i>Liopleurodon pachydeirus</i> | †Pliosauridae | A |
| b | 9800le | <i>Carcharocles megalodon</i> | †Otodontidae | A |
| c | 9800le | <i>Plesiosaurus dolichodeirus</i> | †Plesiosauridae | A |
| d | 9800le | <i>Kronosaurus queenslandicus</i> | †Pliosauridae | A |
| | Margin | LL: Ammonite | | Z |
| | | LR: <i>Ichthyosaurus communis</i> | †Ichthyosauridae | Z |
| | SS 40000le | <i>Temnodontosaurus eurycephalus</i> | †Temnodontosauridae | A |
| | Margin | Ctr: <i>Protostega gigas</i> | †Protostegidae | Z |
| | | LR: <i>Temnodontosaurus platyodon</i> (skull) | †Temnodontosauridae | Z |

| | | | | |
|------------------------|---------|----------------------------------------------------------------|--------------------|---|
| SOLOMON ISLANDS | | 2017 August 21 (Dinosaurs) ^[1] (MS/4 & SS/1) | | |
| 2323a | \$10 | <i>Triceratops horridus</i> | †Ceratopsidae | A |
| 2323b | \$10 | <i>Ornithomimus velox</i> | †Ornithomimidae | A |
| 2323c | \$10 | <i>Ceratosaurus nasicornis</i> | †Ceratosauridae | A |
| 2323d | \$10 | <i>Plesiosaurus dolichodeirus</i> | †Plesiosauridae | A |
| 2348 | SS \$40 | <i>Stegosaurus stenops</i> | †Stegosauridae | A |
| | Margin | UR: <i>Pteranodon longiceps</i> | †Pteranodontidae | Z |
| | | MR: <i>Archaeopteryx lithographica</i> | †Archaeopterygidae | Z |
| | | LR: <i>Tyrannosaurus rex</i> | †Tyrannosauridae | Z |
| | | LL: Griffinfly, <i>Meganeuroopsis americana</i> | †Meganeuridae | Z |

| | | | | |
|-------|------|---------------------------------------------------------------|--------------|---|
| | | 2017 August 21 (Stamp-on-Stamp) ^[1] (MS/4) | | |
| 2337a | \$10 | Woolly Mammoth, <i>Mammuthus primigenius</i> (Poland Sc#1403) | Elephantidae | B |

SOUTH AFRICA **2017 September 8** (Meet *Homo naledi*)
 Block with “standard postage” stamp showing the skull of *Homo naledi*. Short text on the block tells a story of its discovery.

SPAIN **2017 October 2** (12 months-12 stamps: Teruel) (Single)
 The stamp is dedicated to province Teruel, shows various sights and food of the area. The head of an *Aragosaurus* dinosaur can be seen in the LR corner of the stamp. *Aragosaurus* (meaning “Aragon lizard”) was a genus of sauropod dinosaur from the Early Cretaceous period of Galve, province of Teruel, in the autonomous territory of Aragón, Spain. *Aragosaurus* was a large, quadrupedal plant-eating dinosaur that lived about 133–125 million years ago. It was about 18 meters in length and about 28 tons in weight. Like other sauropods, it had a long neck, a long powerful tail, a small head, and a bulky body. Another dinosaur found in Teruel province is *Turiasaurus riodevensis* that was also a sauropod dinosaur, is believed to be the largest dinosaur ever found in Europe, and is among the largest dinosaurs known to date, at 36–39 meters in length and with a weight of 40 to 48 tons.

(50c) *Aragosaurus* Clade: †Sauropoda C

| | | | | |
|-------------|-----------|--------------------------------------------------------------|------------------|---|
| TOGO | | 2017 July 31 (Dinosaurs) ^[1] (MS/4 & SS/1) | | |
| a | 800fr | <i>Ankylosaurus magniventris</i> | †Ankylosauridae | A |
| b | 800fr | <i>Parasaurolophus walkeri</i> | †Hadrosauridae | A |
| c | 800fr | <i>Cryolophosaurus ellioti</i> | Clade: Tetanurae | A |
| d | 800fr | <i>Triceratops horridus</i> | †Ceratopsidae | A |
| | SS 3300fr | <i>Brachiosaurus altithorax</i> (also in Bot margin) | †Brachiosauridae | A |

| | | | | |
|-------------|-----------|--------------------------------------------------------------------------------|--------------|---|
| TOGO | | 2017 July 31 (135th anniv. Charles Darwin) ^[1] (MS/4 & SS/1) | | |
| a | 800fr | Portrait w/ Great Blue Heron, <i>Ardea herodias</i> | Ardeidae | R |
| b | 800fr | Portrait w/ Chimpanzee, <i>Pan troglodytes</i> | Hominidae | R |
| c | 800fr | Portrait w/ Statue | | R |
| d | 800fr | Portrait w/ Galápagos Tortoise, <i>Chelonoidis nigra porter</i> | Testudinidae | R |
| | SS 3300fr | Portrait w/ Great Blue Heron, <i>Ardea herodias</i> | Ardeidae | R |

Corrections/Updates

NORTH KOREA

2017 August 17 (Natural History Museum Paleontology Hall)

Full set contains five blocks with logo of the museum and the outline of a sauropod dinosaur printed on top of each. The blocks show the Museum building, Paleontology Hall, Animal Hall, Botanical Hall, and Universe Hall.

| | | | | |
|-----|-----|----------------------------------------|----------------|---|
| n/a | 50w | <i>Stegosaurus</i> (Paleontology Hall) | †Stegosauridae | B |
| n/a | 50w | Museum building | | R |

Commemorative Postmarks

CHINA P.R.

2017 May 19

Several dozen more postmarks related to “Chinese Dinosaur” stamps have been discovered recently. Nine meter strips and 37 postmarks are known currently. For details and images, see the following web pages:

http://www.paleophilatelie.eu/year/current.html#china_mf

http://www.paleophilatelie.eu/year/current.html#china_pm

Unfortunately, not all dinosaurs are identified. Your help in making these identifications is appreciated.



Future Issues

2017.11.01: (delayed) Armenia: Set/2 Dinosaur stamps, “Flora and Fauna of the Ancient World”

2018.01.01: Hong Kong: Three definitive stamps defined by the original designs of the 2014 Definitive Stamps that feature unique geo-attractions of the Hong Kong UNESCO Global Geopark, and portray Ma Shi Chau, Yan Chau, and Fa Shan. At least one of these stamps can be considered as fossil discovery site. The rock formation at Ma Shi Chau contains a variety of fossils such as crinoids, brachiopods, pteropods, and corals. From these fossils, geologists have determined that the rock layers formed during the Permian period, about 270 million years before present.

2018.03.?: Slovenia: “Mammal Fossils in Slovenia: Mastodon” *Anancus arvernensis*

2018.03.?: Ukraine: Cucuteni–Trypillia culture

Notes:

[1] Commercial issue: Stamps issued only for sale to collectors, not used for postal purpose. Stamps of countries that issued excessive or too expensive stamps. Not recommended for serious collectors.

If you know about any recent or future Paleontology-related stamps not listed above, please send a short message to Associate Editor Mr. Michael Kogan (admin@paleophilatelie.eu), or by post to the Editor, Jack R. Congrove (address on inside cover).

Images and detailed descriptions of all stamps mentioned above can be viewed on the following website: <http://www.paleophilatelie.eu/year/current.html>.

BIOLOGY REFERENCE WEBSITES

This section contains a listing of web links to on-line references relating to biology topics on stamps and general philatelic information. We are providing this information to assist members in research and not to endorse the sites listed in any way. If readers know of, or use other useful sites, please send the links to your editor and we will include them in future editions. New or changed entries since the last publication are indicated with an asterisk (*).

STAMP ISSUES

Catawiki. Listings and illustrations of stamps for sale by topic for every theme from A to Z.

<http://www.catawiki.com/catalog/stamps/100283-themes-topics>

Collectors Club of Chicago: Philatelic Encyclopedia. A comprehensive compendium of definitions for philatelic terms and topics including those in more than 40 foreign languages. The parent site has many additional reports and references. Portions are still under construction.

<http://www.collectorsclubchicago.org/philatelic-encyclopedia.php>

Delcampe. Worldwide listings and illustrations of stamps for sale. They have revised their website to make it more user-friendly.

http://www.delcampe.net/en_GB/marketplace/stamps/

eBay. Worldwide listings and illustrations of stamps, covers, postcards, and other collectibles for sale.

<http://www.ebay.com/>

IGPC. Formerly Cyber Stamps. On-line postage stamp catalogue of worldwide topical issues.

<https://www.igpc.com/>

Neofila. Modern issues from Russia, Eastern Europe, and Baltic States. Also includes some African countries.

<http://www.neofila.com/>

Stamp Collection. On-line postage stamp catalogue of worldwide issues. Includes production information.

<http://colnect.com/en/stamps/countries>

Stamperija. Listings and illustrations of thematic issues from countries located in Africa, Asia, and Oceania produced by Stamperija, Ltd., under contract to several postal administrations. Requires registration, login.

<http://www.stamperija.eu/>

Stamp World. Listings and illustrations of issues from all countries by year. Includes production information. Requires free registration and login.

<http://www.stampworld.com/en/maps/Europe/>

Virtual Stamp Club. Latest news from the world of stamp collecting. Links to other stamp collecting sites and the websites of almost every other collector society or major club.

<http://www.virtualstampclub.com/>

Zillions of Stamps. Worldwide listings and illustrations of stamps for sale.

<http://www.zillionsofstamps.com/>

GENERAL

American Philatelic Society. Listings of dealers, local clubs, stamp shows, and other philatelic events.

<http://stamps.org/>

Collect 4 All. Listings of stamps for sale by country and theme. Includes spectrum of animal stamps.

<http://www.collect4all.com/>

Fauna-Stamps. Listings of stamps for sale (mainly new issues) on all sorts of biological themes including Cats, Dogs, Horses, Birds, Butterflies, Paleontology, Flora, and WWF animal stamps.

<http://www.fauna-stamps.com/>

The Philatelist. A blog by a philatelic journalist in Portugal. Displayed in several selectable languages.

Contains current philatelic news stories and links to archives with past stories. Also includes links to dozens of other world-wide philatelic websites. Philatelic publication reviews.

<http://o-filatelistas.blogspot.com/>

Tree of Life Web Project. Worldwide collaborative effort to map the genome of every organism on earth and to establish their relationships to one another.

<http://www.tolweb.org/tree>

Zip Code Zoo. Links to taxonomic identification for all areas of biology including both zoology and botany. They claim to have a page for every living species with photos for many.

<http://zipcodezoo.com/>

BOTANY

Fungal Biodiversity Center. Dutch site under the Royal Netherlands Academy of Science and Arts dealing with the taxonomy and evolution of fungi. Includes searchable taxonomic databases.

<http://www.cbs.knaw.nl/>

Garden Guides. Replacement site for *www.botany.com*. All kinds of information about plants including cultivation. Listings by common name or scientific name. Grouped by plant types.

<http://www.gardenguides.com/>

International Association for Plant Taxonomy. Links for the standard international codes on taxonomy and nomenclature for algae, fungi, and plants.

<http://www.iapt-taxon.org/nomen/main.php>

Lichens of North America. Many photos and descriptions of lichens and links to related sites.

<http://www.lichen.com/>

ENTOMOLOGY:

Antbase. On-line databases maintained by the American Museum of Natural History and Ohio State University listing all the ant species of the world.

<http://www.antbase.org/index.htm>

Australian National Insect Collection. Listings of Common and Scientific Names, systematic listing, and author abbreviations.

<http://www.ces.csiro.au/aicn/intro.htm>

Cerambycidae. Species listing and illustrations of Cerambycidae of the West Palearctic Region organized by subfamily and tribe.

<http://www.cerambyx.uochb.cz/>

Cercopoidea Organised On Line. Taxonomic database operated under the auspices of *Université Pierre-et-Marie-Curie* in Paris and dedicated to the insects Cercopoidea, which belong to the Hemiptera order.

<http://rameau.snv.jussieu.fr/cool/index.php>

Entomological Data Information System. Internet links to many worldwide websites dealing with biology and ecology, especially Lepidoptera.

<http://www.insects-online.de/linkfram.htm>

FUNET. Finnish university share network site containing updated taxonomic listings for insects, especially Lepidoptera. It also has limited listings for mammals, birds, and plants.

<http://www.nic.funet.fi/pub/sci/bio/life/intro.html>

International Odonata Research Institute. Information about dragonflies and damselflies, including listings by geographical area, taxonomy, and links to related sites.

<http://www.iodonata.net/>

Natural History Museum. British site containing Lepidoptera generic names and type species listings.

<http://www.nhm.ac.uk/our-science/data/butmoth/>

Odonata Society. German site containing listings of Odonata species found in Europe (in German).

<http://www.libellula.org/>

World Bee Genera. UC Riverside site containing listing of all bee generic names and synonyms by family and subfamily current as of September 2007.

<http://cache.ucr.edu/~heraty/beepage.html>

HERPETOLOGY:

AmphibiaWeb. Provides access to information on amphibian declines, conservation, natural history, and taxonomy. Includes an on-line database of species and links to many related sites.

<http://amphibiaweb.org/index.html>

The Reptile Database. Uetz, P. (Ed.). Taxonomic database that provides basic information about all living reptile species, such as turtles, snakes, lizards, and crocodiles, as well as tuataras and amphisbaenians. It does not include dinosaurs.

<http://reptile-database.reptarium.cz/>

Turtle Meter Stamps. Updated website containing a worldwide catalog of meter stamps and meter marks that depict turtles and tortoises based on the owner's collection of more than 220 items. There is an image of each meter with some short comments on its use and scarcity in English, Italian, and French.

<http://turtlemeterstamp.altervista.org/>

World-Wide List of Turtles and Tortoises on Stamps. This on-line listing was produced by Donald N. Riemer, a former member of the Biology Unit and contributor to this journal, who passed away in June 2012. The site contains a checklist of stamps by country along with appendixes listing labels, cinderellas, turtle look-alike stamps, and post offices with "turtle" or "tortoise" in their name.

<http://www.personal.psu.edu/crr2/turtstmp/>

ICHTHYOLOGY

All Tropical Fish. Provides information on marine fishkeeping, corals, invertebrates and freshwater fish. Offers fish forums, community and article and photo upload.

<http://www.alltropicalfish.com/>

FishBase. A searchable database developed at the WorldFish Center in Taiwan in collaboration with the Food and Agriculture Organization of the United Nations. Contains all you ever wanted to know about fishes.

http://fishbase.sinica.edu.tw/home_tw.htm

MAMMALS

Feline Philately Homepage. All sorts of cat stamps, postmarks, and related articles.

<http://www.catstamps.org/>

Mammal Species of the World. On-line database of worldwide mammal species hosted by the Smithsonian National Museum of Natural History.

<http://www.vertebrates.si.edu/msw/mswcfapp/msw/index.cfm>

ORNITHOLOGY

Birds of the World. All sorts of bird stamps by country and species, including new issues.

<http://www.bird-stamps.org/>

Bird Stamp Society. Website of an organization catering to collectors of bird stamps. They publish a quarterly journal that lists new birds on stamps.

<http://www.birdstampsociety.org/index.html>

Theme Birds on Stamps. All sorts of bird stamps by country and species, including new issues.

<http://www.birdtheme.org/>

PALEONTOLOGY:

Dinosaur Illustrations. Galleries of dinosaur illustrations by species. Includes links to paleontology stamp sites and other related sites.

<http://www.search4dinosaurs.com/>

Paleophilatelie. Edited by our Paleontology Editor, Michael Kogan. Catalogue of Paleontology related philatelic items, such as paleontologists, fossils, prehistoric animals, dinosaurs, early man, and museums on official post stamps, envelopes, and post cards. Contains links to related news items and sites.

<http://www.paleophilatelie.eu/index.html>

GLOSSARY OF TERMS

This section lists the definitions of acronyms, abbreviations, and code letters used throughout this journal. This listing does not include abbreviations used for the name of a taxonomic author, or commonly used symbols.

Checklist Codes:

| | | | |
|-----|--------------------------------------------------|---|-----------------------------------------------|
| Br | Branch | A | Subject is the primary design element |
| Fl | Flowers (with or without other plant parts) | B | Subject is only part of the main design |
| Fr | Fruit (including seeds, nuts, grains, etc.) | C | Subject is a minor representation |
| FrV | Grain head with sheaf or stalk | G | Subject is a generalized depiction |
| L | Lichen | R | Related subject (e.g., scientist, equipment) |
| M | Mushroom or fungus | S | Subject is a stylized or symbolic depiction |
| T | Trees (without flowers or fruit) | U | Subject is unidentified or unidentifiable |
| V | Various (vines, vegetables, roots, leaves, etc.) | X | Subject is a lookalike (e.g., mushroom cloud) |
| Wr | Wreath | Z | Subject is in the Margin or selva |
| Wr* | Head wreath (or chaplet) | * | Subject depicted in natural colors |

Acronyms and Abbreviations:

| | | | |
|--------|-----------------------------------------------|-------|--------------------------------------|
| AAPE | American Association of Philatelic Exhibitors | ovpt | overprinted |
| anniv | anniversary | perf | perforated |
| APC | American Philatelic Center (Bellefonte, PA) | photo | photogravure |
| APS | American Philatelic Society | ptg | painting or artwork |
| ATA | American Topical Association | R | right position indicator |
| bkl | booklet | s/a | self-adhesive |
| Cap | captioned | Sc# | Scott Catalogue number |
| CTO | canceled to order | s-o-s | stamp on stamp |
| CTR | center position indicator | sp. | species |
| DS | deluxe sheet | SS | souvenir sheet |
| Ed. | Editor | ssp. | sub-species |
| Expo | Exposition | s/t | se-tenant |
| horiz | horizontal orientation | surch | surcharged |
| imperf | imperfurate | UL | upper left position indicator |
| Intl. | International | unwmk | un-watermarked |
| L | left position indicator | UPU | Universal Postal Union |
| litho | lithography | UR | upper right position indicator |
| LL | lower left position indicator | US | United States |
| LR | lower right position indicator | USPOD | United States Post Office Department |
| mm | millimeter | USPS | United States Postal Service |
| MS | miniature sheet | var. | variety |
| ML | middle left position indicator | vert | vertical orientation |
| MR | middle right position indicator | Vol | Volume |
| N/A | not applicable (or not available) | wmk | watermarked |
| nd | non-denominated | WWF | World Wildlife Federation |
| NTSS | National Topical Stamp Show | Yv# | Yvert & Tellier Catalog number |
| NWF | National Wildlife Federation | | |

Entomology Family Abbreviations:

| | | | | | |
|------|-------------------|------|------------------|------|-----------------|
| ACR | Acrididae | AES | Aeshnidae | AND | Andrenidae |
| ANO | Anobiidae | ANT | Anthicidae | API | Apinae |
| ARC | Arctiidae | BEL | Belostomatidae | BLA | Blattidae |
| BRA | Brahmaeidae | BRAC | Braconidae | BUP | Buprestidae |
| CAL | Calopterygidae | CAN | Cantharidae | CAR | Carabidae |
| CAS | Castniidae | CER | Cerambycidae | CHR | Chrysomelidae |
| CHRY | Chrysopidae | CIC | Cicadellidae | CICA | Cicadidae |
| COC | Coccinellidae | COE | Coenagrionidae | COR | Corydalidae |
| CORD | Cordulegastridae | CORE | Coreidae | COS | Cosmopterigidae |
| CRA | Crabronidae | CRAM | Crambidae | CUL | Culicidae |
| CUR | Curculionidae | DER | Dermestidae | DRO | Drosophilidae |
| DYT | Dytiscidae | ELA | Elateridae | FOR | Formicidae |
| FUL | Fulgoridae | GEO | Geometridae | GEOT | Geotrupidae |
| GOM | Gomphidae | GRA | Gracillariidae | GRY | Gryllidae |
| GRYA | Gryllacrididae | HAL | Halictidae | HES | Hesperiidae |
| HYM | Hymenopodidae | ICH | Ichneumonidae | LAM | Lampyridae |
| LAS | Lasiocampidae | LIB | Libellulidae | LIM | Limacodidae |
| LUC | Lucanidae | LYC | Lycaenidae | LYG | Lygaeidae |
| LYM | Lymantriidae | MAN | Mantidae | MEG | Megachilidae |
| MEL | Meloidae | MEM | Membracidae | MIR | Miridae |
| MUS | Muscidae | MYR | Myrmeleontidae | NOC | Noctuidae |
| NOL | Nolidae | NOT | Notodontidae | NYM | Nymphalidae |
| OEC | Oecophoridae | PAP | Papilionidae | PAS | Passalidae |
| PEN | Pentatomidae | PHA | Phasmatidae | PHY | Phylliidae |
| PIE | Pieridae | PLU | Plutellidae | POM | Pompilidae |
| PSY | Psychodidae | PTE | Pterophoridae | PYR | Pyralidae |
| PYRG | Pyrgomorphidae | RAP | Rhaphidophoridae | RED | Reduviidae |
| RIO | Riodinidae | ROM | Romaleidae | SAR | Sarcophagidae |
| SAT | Saturniidae | SCA | Scarabaeidae | SCO | Scoliidae |
| SCU | Scutelleridae | SES | Sesiidae | SIL | Silphidae |
| SIM | Simuliidae | SIR | Siricidae | SPH | Sphingidae |
| SPHE | Sphecidae | STA | Staphylinidae | SYR | Syrphidae |
| TAB | Tabanidae | TEN | Tenebrionidae | TEP | Tephritidae |
| TET | Tettigoniidae | TIP | Tipulidae | TOR | Tortricidae |
| TRI | Trichogrammatidae | URA | Uraniidae | VES | Vespidae |
| YPO | Yponomeutidae | ZYG | Zygaenidae | | |

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