

BIOPHILATELY

OFFICIAL JOURNAL OF THE BIOLOGY UNIT OF ATA

JUNE 2019

VOLUME 68, NUMBER 2

Pandamonium!



Vladimir Kachan

Delicate Beauty of Butterflies

More Inside >>



IN THIS ISSUE

From the Editor's Desk	85
President's Message	86
Secretary-Treasurer's Corner	87
New Members	87
News of Note	87
New Forever Stamps	90
Stamp Stories – Jack R. Congrove	95
Birds of Prey	118
Glossary	163

NEW ISSUES:

Botany – Christopher E. Dahle	97
Fungi – Paul A. Mistretta	111
Mammalia – Michael Prince	113
Ornithology – Glenn G. Mertz	121
Invertebrates – Ian Hunter	145
Ichthyology – J. Dale Shively	147
Entomology – Donald Wright, Jr.	152
Paleontology – Michael Kogan	156

ARTICLES & ILLUSTRATIONS:

The Delicate Beauty of Butterflies – Vladimir Kachan	91
Columbia Wildlife Refuge – Lisa D. Foster	106
New Plants in the Philatelic Herbarium – Christopher Dahle	107
New Birds in the Philatelic Aviary – Charles E. Braun	138
Biology Reference Websites	160

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The Biology Unit, founded in 1951, is a study unit of the American Topical Association dedicated to the international cooperative study of biological postage stamps and related material.

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 August 2019.

FROM THE EDITOR'S DESK

In this issue, you will find several references to the joint stamp show this summer being sponsored by the American Topical Association (ATA) and the American Philatelic Society (APS). The StampShow-National Topical Stamp Show will be held in Omaha, Nebraska, on 1–4 August 2019. This will be the largest stamp show in the United States this year and the organizers expect to build on the outstandingly successful joint show held last year in Columbus, Ohio.

This joint show concept is expanding to other shows as well. Combining the efforts of two or more organizations certainly has some great benefits for these groups. They can share the expenses and work efforts and that reduces the costs for both groups. The synergy also enables them to offer more activities and expose visitors to more philatelic possibilities, not to mention expanding the dealer base and the quantity and quality of exhibits and presentations.

However, there is a cost to following this concept. The most important is that it results in fewer philatelic shows and that means fewer opportunities for dealers to make sales and fewer chances for collectors to attend a show. This makes it even more important to make plans to come to Omaha and take part in this opportunity. See you there.

There is no Herpetology column in this edition, but our Associate Editor tells me he should have a listing in the next edition. Also, my inbox for articles is almost empty, so I urge everyone (once again) to check your collections for an interesting item and write it up for the rest of us to appreciate.

There have been some questions about how we create our new issue listings.

Each of our Associate Editors constructs their new issue listings in accordance with their own interpretation of the topic. Some editors only list items that depict an identifiable subject. In some of these cases, the subject may clearly be animal or plant, but the image may not be refined enough to make a confirmed identification, so we list it as unidentified (U/I). This is your cue to chime in with what you think the subject is.

Other editors include designs showing stylized images of the topic in order to provide more complete listings for those collectors who wish to include these items. In some cases, editors may even list stamps showing related subjects such as biologists, or scientific establishments that do not show an image of a biological subject at all.

If the listing in your topical area does not satisfy your interest, please contact the corresponding Associate Editor and let him know what other information you would like to see included.

I would like to remind all readers that we have a listing of websites in the back of each issue that provide useful information about biological subjects including topics on stamps. Many of these sites include images of stamp issues.

Jack R. Congrove



DUES RATES (US\$) (note new amounts)

US membership	\$25
Canada membership	\$30
Worldwide membership	\$45
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ADVERTISING RATES

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

Although it is May, this week feels more like March. The garden is blooming now with iris, bleeding hearts, and pansies. The peonies will be opening shortly. Birds are swarming the feeders and gathering nesting material. Can't wait to see the little ones appear. May is Zoo Babies month here in Cincinnati. Some were born months ago and some are very recent, but all are so cute!

August and the National Topical Stamp Show are fast approaching. The ATA has special plans this year for its 70th Anniversary. Join us in the celebrations. There will be a First Day Ceremony for the Military Working Dogs stamps.

The Biology Unit will be involved with the ATA booth again this year. If you are coming to the show, please stop by the booth. Our Study Unit meeting will again be on Saturday, but please note the time will be at 11:00 AM, which is an hour later than usual.

Omaha, Nebraska, offers a number of sites for the Biological Studies. I plan on arriving early and visiting the Henry Doorly Zoo. The zoo covers greater than 130 acres with more than 960 animal species. Can't wait to see the Cat Complex, Kingdoms of the Night, and the Aquarium. The Aviary exhibit is extraordinary, with more than 500 birds under one roof.

Lauritzen Gardens Botanical Center is the place for the botanists and all flower lovers to explore. With over a dozen different gardens, it is a must see. For ornithologists, they have a special bird sanctuary to visit. There is even a Model Train Garden, a tie in with this year's Show Theme.

Hope to see you this coming August in Omaha, Nebraska.



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SECRETARY-TREASURER'S CORNER

ANNUAL MEETING

The Biology Unit will hold its annual meeting at the joint APS StampShow-National Topical Stamp Show (NTSS) in Omaha, Nebraska, at 11:00 AM on Saturday, 3 August 2019. Ordinarily this is a social meeting and we do not discuss detailed business matters. The StampShow-NTSS show runs 1–4 August at the CHI Health Center Omaha. Admission is free.



NEW MEMBERS

There were no new members during this quarter. 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 Secretary did send complimentary issues of *Biophilately* to new ATA members who listed a biology topic in Topical Time, inviting them to join the Unit.

NEWS OF NOTE

NATIONAL TOPICAL STAMP SHOW

Our parent organization, the American Topical Association (ATA), is again taking advantage of a wonderful opportunity to partner with the American Philatelic Society (APS) to hold its annual National Topical Stamp Show (NTSS) on 1–4 August 2019, at the CHI Health Center convention center in Omaha, Nebraska. The NTSS is an APS sponsored World Series of Philately (WSP) national-level exhibition.

The APS is handling arrangements for the show, except for the ATA President's Reception, the ATA after-show tour, and volunteers to work at the ATA booth. Those desiring to attend must submit forms and pay associated fees to the APS.

To view the latest show information, go to the APS website (<https://stamps.org/stampshow>). Check the website frequently for updates.

1. The show page gives dates, hours, show location, and hotel information as well as links to various forms.
2. **Hotel Reservations:** Click on the link *Make your show reservations online with the Hilton Omaha*.
3. **Pre-Registration:** *Pre-Registration ends on 10 July 2019*. Completing this form will generate a name badge to be picked up at the Registration Desk. The badge will include both your APS and ATA membership years. By completing this form online, you help reduce administrative time and the possibility of spelling errors. The PDF version of the form includes options to purchase event tickets.
4. **Exhibitor Information:** Entries were due by 15 May.
5. **Dealer Information:** A showroom floor plan is at this link: <https://stamps.org/Portals/0/Show%20Floor.pdf>.
6. **Purchase Tickets:** The following events are included: APS/ATA Celebration Banquet. On-the-Road Course(s), and Boy Scout Merit Badge Workshop. Tickets for the ATA President's Reception and Monday tour are available on the ATA website.
7. **Society Booth Information:** The Biology Unit will hold their annual general meeting at 11:00 AM on Saturday, 3 August 2019, in room 212.
8. **Volunteer Information:** All ATA members are encouraged to volunteer with the APS. Click on the Volunteer Task Descriptions" link to read about various volunteer options. If you volunteer for a total of eight hours at the show, you are eligible to receive a free ticket to the Celebration Banquet (a \$60 value). The ATA booth also needs volunteers and since the Biology Unit is helping to sponsor this booth, we share the responsibility for operating it. Check the ATA website (<http://americantopicalassn.org>) or contact Vera Felts to sign up.

ATA EXECUTIVE DIRECTOR RETIRING

Vera Felts, long-time Executive Director and the face of the ATA, has submitted her notice that she will be retiring this year. Many of our members are personally acquainted with Vera and I know we will miss her helpful and knowledgeable efforts at running the day-to-day operation of the Association.

Vera recently celebrated her tenth anniversary as the Executive Director. During her tenure, she began the ATA Ambassador Program that has recruited more than 1,000 members for the ATA. She also developed the popular "Taste of Topicals" packets to entice new and casual collectors to the organization. She has also improved the quality of the ATA publications.

Most members do not realize the amount of work involved in operating the Association. In addition to responding to all member needs and inquiries, the Executive Director maintains membership records, prepares promotional materials and mailings, processes applications and renewals, and coordinates Ambassador support for shows.

On the financial side, the ED maintains financial records, collects dues and other payments, prepares and manages the budget, files taxes, and oversees fundraising. In the publications area, the ED provides input and a column for each issue of *Topical Time*, coordinates the development of ATA handbooks, prepares printed materials for various activities, oversees the work of the checklist coordinators, and provides checklists requested by members.

The ED maintains the ATA office, promotes the organization to increase and retain membership, maintains an inventory of all ATA materials, and assists the coordinators of ATA chapters, study units, committees, and other volunteers.

The ATA is now seeking applicants for Executive Director, which is a full-time position. Send inquiries to the ATA Headquarters, P.O. Box 8, Carterville, IL 62918-0008. Email: americantopical@msn.com.

DISTINGUISHED TOPICAL PHILATELIST

The 2019 Distinguished Topical Philatelist, the highest award given by the American Topical Association, is being awarded to Aimée Devine of Janesville, Wisconsin. Aimée is the talented author of nearly 500 pages of youth activities on the ATA website, which are available free and can be downloaded to share with youth and beginning collectors. Her features on topics, including Mexico, France, the circus, fun foods, dragons and many more, are beautifully designed and can be appreciated by collectors of all ages.

Her popular "Topical Tidbits" pages, featured on the ATA website since 2012, were inspired by Jean Stout during a presentation on attracting children to topicals at NTSS 2011 in Milwaukee. She was encouraged by ATA youth coordinator MaryAnn Bowman, who continues to collaborate with her on many projects.

Recently, Aimée wrote and designed *The Magical World of Stamp Collecting*, a colorful Disney-themed booklet, which won a first award (with *Topical Time*) in the 2018 International Philatelic Literature competition sponsored by Auction House Christoph Gärtner.

In 2016, she was extensively involved in creating materials for the youth area at the World Stamp Show in New York City. Those materials are now available free at the Wisconsin Federation of Stamp Clubs' website (www.wfscstamps.org) in the youth section.

Aimée was introduced to philately as a child by her grandmother, who gave her an envelope of stamps that had belonged to Aimée's great-grandfather. "I loved looking through the stamps and imagining what kind of man he was," she said. "That Christmas my parents gave me a stamp album, and I was hooked!" Currently, Aimée collects children's literature, fruits, vegetables, ethnic costumes, and clipper ships on stamps.

The list of activities this busy philatelist and mother pursues seems almost endless. She is secretary of the Janesville Stamp Club and is a member of the Badger Stamp Club, Rockford Stamp Club, and ATA Chapter Five (Milwaukee).

The award will be presented at the Celebration Banquet at StampShow-NTSS in Omaha on Saturday, 3 August.

ATA ELECTIONS

The American Topical Association, our parent organization, held elections for its officers and Board of Directors via its “Because You Belong” website with voting cutoff on 31 May. The terms for the officers and board members are staggered so that about one-third of the positions are voted on each year. The nominees, who were all running unopposed, were:

President: Dawn R Hamman, Venice, Florida
 1st Vice President: Jeffrey A Hayward, Staten Island, New York
 2nd Vice President: Jack R. Congrove, Fort Lewis, Washington
 Director: Dale E. Smith, Kansas City, Missouri
 Director: Christopher E. Dahle, Cedar Rapids, Iowa

The newly elected officers and board members will be installed during a meeting at the National Topical Stamp Show in Omaha, Nebraska, on Tuesday, 30 July 2019.

ATA CACHET OFFERING

At the St. Louis Stamp Expo on 29 March 2019, the US Postal Service held a first day ceremony to issue its Coral Reef postcard stamps. These colorful stamps are available from the American Topical Association in a collectible four-piece first day cover (FDC) set.

Each cachet with coordinating enclosure card showcases one coil and one sheet stamp of the same design with the official USPS FDC cancel. The cachets were designed by Jane Eastwood Schemonia, who is the administrative assistant to the ATA Executive Director at the ATA headquarters.

Only 50 sets (with individual stuffer cards for each stamp) were made, so Biology Unit members should order as soon as they can. Please send a SASE to ATA, P.O. Box 8, Carterville IL 62918-0008 along with a check for \$11 for all four covers, or purchase individually for \$3 each. If paying by PayPal to americantopical@msn.com, enclose an extra dollar for return postage. If purchasing individual cachets, please specify coral choice: brain, elkhorn, pillar, or staghorn. This is a limited time offer; when they sell out, they sell out!



ATA CHECKLISTS

The ATA is the world’s leading supplier of topical stamp checklists. Checklists are available only to ATA members and are one of its best member services. The source for these checklists is a dATABase containing more than 418,885 stamps and 735,445 topical listings. There are currently 1,349 different standard checklists. Members who have purchased ATA checklists from the dATABase (since May 2014) can receive free updates once a year upon request.

The April 2019 checklist updates have been completed and the coordinators have added an additional 1,164 items. The checklist dATABase now has a total 735,445 items.

Checklists should be ordered directly from the ATA Office, by emailing americantopical@msn.com, or calling 618-985-5100, or mailing your order. For convenience, you may use a PDF order form available on the Because You Belong website (www.ata-becauseyoubelong.org/index.php/resources/checklists).

FROG FOREVER STAMPS

On 9 July 2019, in Boise, Idaho, the U.S. Postal Service plans to release four new stamps in a booklet of 20, featuring digital illustrations of four North American frogs.

The species depicted are: the Pacific Tree Frog (*Pseudacris regilla*), the Northern Leopard Frog (*Lithobates pipiens*), the American Green Tree Frog (*Hyla cinerea*), and the Squirrel Tree Frog (*Hyla squirella*).

Working with a primarily green color palette and touches of brown, artist Nancy Stahl captured the essence of each animal with enough important defining features to make each recognizable. USPS art director William J. Gicker designed the stamps. The printer has not been announced.



Stahl has designed more than 20 different stamps for the USPS including these with biological themes: the 37c Snowy Egret (2003), 26c Florida Panther (2007), 17c Bighorn Sheep (2007), 62c Dragonfly (2008), 28c Polar Bear (2009), 64c Dolphin (2009), Semi-postal Save Vanishing Species (2011), Forever Bobcat (2012), and Forever Hummingbird (2013).

WINTER BERRIES FOREVER STAMPS

Another set of stamps the U.S. Postal Service plans to release later this year depicts highly detailed botanical illustrations of Winter Berries. The four designs will be issued in a booklet of 20.

The bright designs highlight the bold colors and rich textures of the berries and feature the following plants: the Winterberry (*Ilex verticillata*), the Juniper Berry (*Juniperus communis*), the Beautyberry (*Callicarpa americana*), and the Soapberry (*Sapindus saponaria*).

Artist Steve Buchanan worked with art director Antonio Alcalá to create these four new stamps. The printer has not been announced.

Buchanan, who specializes in botanical and entomological subjects, has also designed several other stamps for the USPS including these with biological themes: 33c Insects and Spiders (1999), 33c Tropical Flowers (1999), 34c Carnivorous Plants (2001), 37c Reptiles and Amphibians (2003), 39c Crops of the Americas (2006), and 41c Pollination (2007).



An interesting collection could be assembled based on each artist who created the designs.

THE DELICATE BEAUTY OF BUTTERFLIES

Vladimir Kachan, Belarus

There are about 180,000 described species of butterflies and moths spread throughout the globe. Butterflies are usually associated with grace—they roam the skies with an admirable air of freedom. The beauty of each butterfly is in its wing pattern—a delicate pattern crafted by nature’s paintbrush.

Among other functions, the coloring of butterflies has a heat regulating purpose. The butterflies with light coloring keep in well-lit places such as in the crowns of the trees, on the edge of forests, or on the sand at river banks. Butterflies with dark coloring in most cases fly in the shade. The wings of tropical butterflies are covered with optical scales. Because they are exposed to the direct rays of the sun, their shiny metallic coverings reflect the rays and serve as protection from excessive over-heating.

A beautiful and easily recognizable butterfly is the Common Swallowtail (*Papilio machaon*) was named by Carl Linnaeus in the 10th edition of *Systema Naturae* in 1758, along with nearly 200 other species of butterflies. This butterfly is widespread in Europe, as well as in Asia, northern Africa, and northern America. The butterfly has a strong and fast flight, but frequently pauses to hover over flowering herbs and sip nectar. It frequents alpine meadows and hillsides, and males are fond of “hilltopping,” congregating near summits to compete for passing females. At lower elevations, it can be seen visiting gardens.

The Apollo (*Parnassius apollo*), one of the most adorable and large butterflies in Europe, lives in the Alps at an altitude of 600 to 2,500 meters. This typical mountain species prefers hills and flowery alpine meadows and pastures of the continental European mountains, in Spain, Scandinavia, and Central Europe, in the Balkans up to northern Greece, and in the Alps between Italy and France.

It is also present in some areas of the central Asia. It has bright red spots on the front and rear wings. The color scheme of the wings of the Apollo combines the nobility of whiteness with an amazing spotted color. In the rays of sunlight, the butterfly reminds one of an exotic flower, miraculously soaring in the air slowly flying from flower to flower.

The Red Admiral (*Vanessa atalanta*) is a well-known colorful butterfly, found in temperate Europe, Asia, North Africa, and North America. It is found even on Haiti and New Zealand. Figure 3 is an image of a 1963 telegram form from New Zealand showing a Red Admiral at upper right.

The Red Admiral is resident only in warmer areas, but migrates north in spring, and sometimes again in autumn. This medium-sized butterfly is identified by its striking dark brown, red, and black wing pattern. In northern Europe, it is one of the last butterflies to be seen before winter sets in, often feeding on the flowers of ivy on sunny days. The Red Admiral is also known to hibernate, re-emerging individuals showing prominently darker colorings than first-brood subjects. The butterfly also flies on sunny winter days, especially in southern Europe.

The Common Brimstone butterfly (*Gonepteryx rhamni*) is a very attractive, light lemon or yellow butterfly that has a rather pointed wing shape. Some say that this butter-colored insect was responsible for the name “butterfly.” It lives in Europe, North Africa, and Asia. It hibernates during the winter. Many butterflies suck nectar and live several weeks or months. However, the Brimstone butterfly can be entered in the book of records for the duration of life among the butterflies of the world. Its lifespan, taking into account the hibernation, can last for eleven months.



Fig 1. *Papilio machaon* L. artwork for unissued Italy



Fig 2. *Parnassius apollo* L. unlisted imperforate souvenir sheet, Sierra Leone, 2010

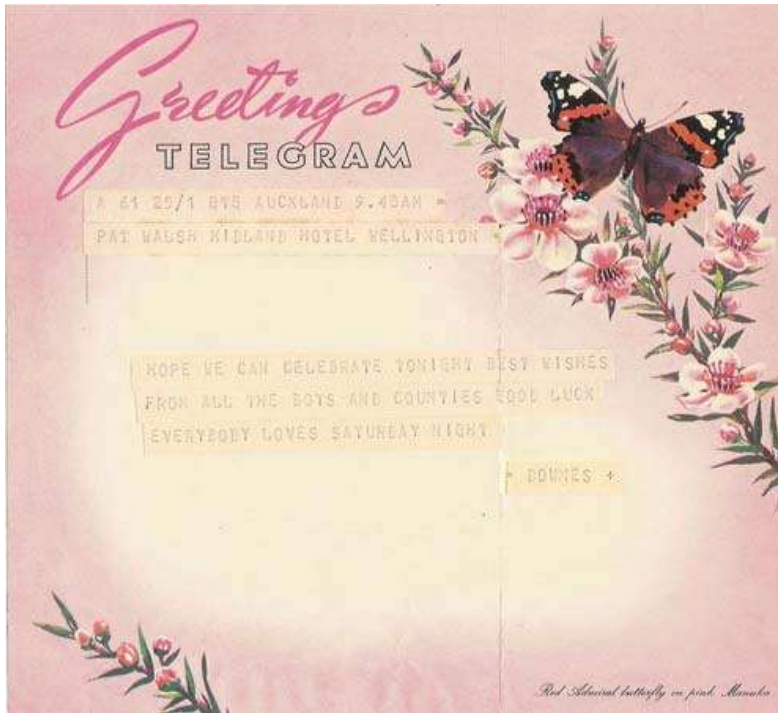


Fig 3. *Vanessa atalanta* L.
telegram format, New Zealand, 1963

The Monarch (*Danaus plexippus*) is the most popular butterfly in America. In 1492, when Columbus's ships were approaching Cuba, the sailors were astonished by a previously unknown natural phenomenon. They observed a huge swarm of butterflies persistently flying in one direction. The captain put down in his diary, "Such innumerable flocks of butterflies appeared, that the sky darkened."

It is a pity that he did not describe those insects in detail, but almost surely it may be said that Columbus met the passage of Monarch butterflies. They live in the USA and Canada and in autumn they fly to winter in the south—to Florida, Mexico, Cuba, and the Bahamas covering distances of more than 3,600 kilometers. They fly at the height of 120 meters. Their speed, depending on the speed of wind, is from 15 to 50 kilometers per hour. At dark their flight stops.



Fig 6. *Danaus plexippus* L.
normal & color missing, Mexico, 1988, Sc#1559

generation, which has never been to their wintering location, makes the return trip. Their phenomenal genetic memory helps them to find the wintering place without a mistake.



Fig 4. *Gonepteryx rhamni* L.
postage meter Germany 2002

The African Giant Swallowtail (*Papilio antimachus*) is an exceedingly beautiful butterfly with a relatively wide range in Africa's primary rainforests. The African Giant Swallowtail is the largest African butterfly and has a long, narrow wingspan of 20–23 cm and no tails. It is orange to reddish-brown with a complex pattern of black and yellow-ochre markings. The butterfly has no natural enemies because it is very poisonous, with a toxin potent enough to kill up to six average house cats.



Fig 5. *Papilio antimachus* Dry.
Artwork, Burundi, 1984, Sc#614

For many years, people could not find the wintering places of these butterflies. Only in 1986, one Mexican amateur student of local lore searched in the Sierra Madre Mountains not far from the Mexican capital. In an area of about eight hectares he found about 50 million butterflies. They sat densely packed on evergreen plants, making the crowns of the trees and bushes look orange.

It happens that under the weight of the butterflies, branches with a thickness of seven centimeters can break. It takes three generations for the butterflies to reach their far northern areas again and the fourth

The butterfly *Ancyluris formosissima* with rapid flight and instant reaction is present in tropical rainforests of South America, mainly in Ecuador, Peru, and Bolivia. It can be found at an elevation up to 3,000 meters above sea level. Its wingspan is about 38–45 millimetres. The upper sides of the forewings are dark brown with a blue-green band, while the base is white and brown. The hind wings are white, pink, and brown, with a brilliant blue-green marginal band and a small red area. At the edge of the hind wings there is a short tail. In South America, this butterfly is called a “living treasure.” The species name *formosissima* means “very beautiful.”

In the tropical forests of South America there are the butterflies that have lost the scaly covering on their wings, making them almost completely transparent. Only the hind wings display eyes that are typical for this family. When such a butterfly is on the crown of a tree, it is quite unnoticeable because the design of the leaf on which it sits appears through its glassy wings. One of these butterflies is the Amber Phantom (*Haetera piera*). These elusive crepuscular butterflies are denizens of the darkest and dampest recesses of the rainforest.

The Blue Morpho (*Morpho peleides*) from the rainforests of South America is among the largest in the world, with a wingspan up to 20 cm. The males have beautiful metallic-blue upper wings, while the females are drab.



Fig 9. *Morpho peleides* Kollar original artwork, Venezuela, 1966

As the butterflies move their wings up and down during flight, they seem to disappear, and then reappear a short distance away, looking like ethereal flashes of bright blue light. The dark undersides of their wings strengthen this effect. Combined with an undulating pattern of flight, this ability to change color quickly makes them difficult for predators to pursue.

The magnificent *Morpho rhetenor*, also called Blue Morpho, is a very beautiful butterfly from South America. Their distribution extends from Peru to Colombia and from Guyana to Suriname. The wingspan is about 14–17 cm. Only the wings of the male are blue. They shine the most brilliant blue of all butterflies due to the structure of the wing scales. They always fly energetically at a great height, mounting from 3 to 6 meters with an undulating flight. In bright sunlight, each wing flap can be seen up to a distance of one third of a kilometer.



Fig 7. *Ancyluris formosissima* Hew. Guinea, 1973, Sc#641

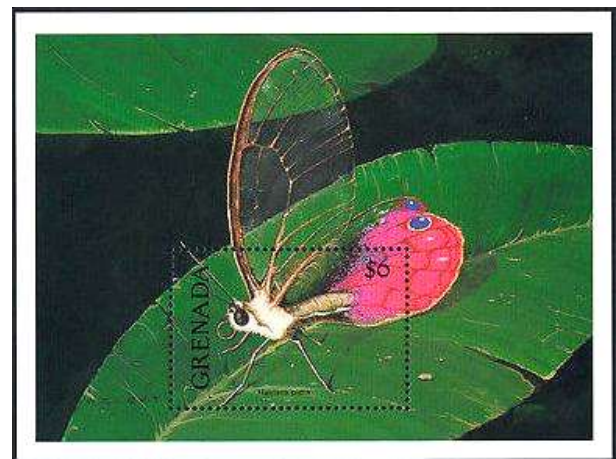


Fig 8. *Haetera piera* L. Grenada, 1991, Sc#1948

Their iridescence stems from the microscopic structure of their wings. Pilots flying over the rain forest can occasionally see brief flashes of blue as these butterflies travel above the forest canopy. Iridescent surfaces, such as butterfly wings, help animals to elude potential predators. When these insects fly, the upper surface of their wings continually changes from bright blue to dull brown because the changing angle of the light striking the wings.



Fig 10. *Morpho rhetenor* Cr. Niue, 2004, Sc#786

The Common Rose (*Pachliopta aristolochiae*) is an unusual swallowtail butterfly belonging to the roses, or red-bodied swallowtails. It is beautiful butterfly that is extensively distributed across South and Southeast Asia. The red body, slow peculiar flight, bright colouration and pattern of the wings are meant to indicate to predators that this butterfly is inedible, being well protected by the poisons it has sequestered from its larval food plant. The Common Rose is active much earlier in the morning than most butterflies and remains so throughout the day until dusk. It flies just as readily in the shade as in the sun, and frequently visits flowers.



Fig 11. *Pachliopta aristolochiae* Fabr. Malaysia, 1996, aerogramme



Fig 12. *Troides helena* L. Hong Kong, 2000, Sc#903

The Common Birdwing (*Troides helena*) with wingspan of 140–170 mm is one of the largest and most beautiful butterflies in Asia. Its common name is derived from the fact that a careless look at this conspicuous black and yellow butterfly might almost give the impression of a bird in flight.

The dramatic contrast of golden yellow hind-wings and glossy black forewings gives this species a striking appearance, and serves as a protection mechanism by warning potential predators that it is distasteful. The Common Birdwing enjoys the widest distribution of all birdwings, stretching from India and Nepal in the west, to China in the north, and down through Southeast Asia to Indonesia in the south and east. This species is protected under Wild Animals Protection Ordinance in Hong Kong.

Queen Alexandra’s Birdwing (*Ornithoptera alexandrae*) is the largest butterfly in the world, with females reaching wingspans up to 28 cm. Its distribution is restricted to the forests of the Oro Province in eastern Papua New Guinea. This species displays sexual dimorphism. The wings of males are long with angular apices. They are iridescent bluish green with a black central band. The underside is green or blue green with black veins. The wingspan of the males is about 20 cm.

Females are larger than males with markedly rounder, broader wings. The female can reach a body length of 8 cm and a body mass of up to 12 grams, all enormous measurements for a butterfly. The female has brown wings with white markings arranged as two rows of chevrons. The hindwings are brown with a submarginal line of centered yellow triangles. They fly almost untouchable in the crowns of trees of the rainforests of New-Guinea. The species is considered endangered.



Fig 13. *Ornithoptera alexandrae* Roths. preliminary art, Papua New Guinea, 1975



Fig 14. *Ornithoptera alexandrae* Roths. ♀ maximum card, Papua New Guinea, 1988

An imperfect respiratory system limits butterfly size. Their colorless blood cannot carry oxygen, the flow of which to their organs depends only on diffusion. That is why the biggest butterflies live in the tropics. The variety and coloration of wings compare butterflies to the most beautiful creatures on Earth.

I hope that my article illustrated by different types of philatelic materials will help philatelists in creating, developing, and improving exciting philatelic exhibits about butterflies.

Please write to the author Vladimir Kachan by e-mail: vladimirkachan@mail.ru.

STAMP STORIES

Jack R. Congrove, BU1424

This is a continuation of the Biology Unit one-frame exhibit “What Does (your topic) Do in Its Spare Time?” shown at the joint ATA-APS show in Columbus, Ohio. The remaining pages will appear in upcoming editions.

Page 7: Donkeys (Bob Mather)

WHAT DOES A DONKEY DO WITH HIS SPARE TIME?



This donkey took up singing lessons in his spare time and now he can croon with the best of them. You can see in Daisy Ducks eyes that she is enchanted by his velvet tones. Move over Frank Sinatra! Hee-Haw.



This donkey and his friends Don (Quixote) and Sancho (Panza) set out to conquer the world. The first need would be to defeat those dreadful windmills. He used some of his spare time to plan their attack strategy.



This donkey loves to shop in her spare time. Here she is proudly showing off her new bonnet.

This donkey found out that while he was away from his job and on his spare time, that the boss was back biting him. Well turn about is fair play, isn't it?



This donkey reached the mandatory retirement age of a ripe old 25. He soon found that he had too much spare time however, and decided to join the circus.

This was the ideal situation as he would work Friday, Saturday, and Sunday and then have the rest of the week off to tend to retirement activities.



You've heard of the Goose that laid the golden eggs. Well this Donkey became a magician in his spare time and he can now cough up golden coins.

FROGS

In their day job, frogs work to keep the world's insect population under control. But in their spare time they are actors who **star in fairy tales.**

In some tales, they dine with royalty.



In other stories, they play with their animal friends.



Some frogs are noted musicians and star in musicals.

Frogs can pretend to be any character like this one who acted like an ox.



Many frogs do their own stunt work.



Some frogs star in adventure stories.

Even their cousins the toads are talented actors.





BOTANY

Editor

Christopher E. Dahle, BU1269

New Listings



Scott#	Denom	Common Name/Scientific Name	Family/Subfamily	Code
ALBANIA 2018 December 7 (Flowers) (Horiz Pair)				
3022a	40l	Okra, <i>Abelmoschus esculentus</i>	Malvaceae	Fl Fr A
3022b	1000l	St John's Wort, <i>Hypericum perforatum</i>	Dilleniaceae	Fl Fr A
AUSTRALIA 2019 February 5 (Greetings) (Set/8 & 8ea Bklt/10)				
4915	\$1	Roses, <i>Rosa</i> × <i>hybrida</i> (perf 14¾×14)	Rosaceae	Fl A
4920	\$1	White Rose, <i>Rosa</i> × <i>hybrida</i> (perf 14¾×14)	Rosaceae	Fl A
4923	\$1	Roses, <i>Rosa</i> × <i>hybrida</i>	Rosaceae	Fl A
4923a		Bklt/10 (Sc#4923) (die cut 11¾) (s/a)		
4928	\$1	White Rose, <i>Rosa</i> × <i>hybrida</i>	Rosaceae	Fl A
4928a		Bklt/10 (Sc#4928) (die cut 11¾) (s/a)		
CANADA 2019 February 14 (Gardenias) (SS/2, Horiz Pair, Bklt/10)				
3166a	SS (90c)	Gardenias, <i>Gardenia jasminoides</i> (pink bkgrd)	Rubiaceae	Fl A SS
3166b	SS (90c)	Gardenias, <i>Gardenia jasminoides</i> (green bkgrd)	Rubiaceae	Fl A SS
3166		SS/2 (Sc#3166a–b) (perf 13)		
3167	(90c)	Gardenia, <i>Gardenia jasminoides</i> (pink bkgrd)	Rubiaceae	Fl A
3168	(90c)	Gardenia, <i>Gardenia jasminoides</i> (green bkgrd)	Rubiaceae	Fl A
3168a		Horiz coil pair (Sc#3167–68) (die cut 8 vert) (s/a)		
3169	(90c)	Gardenia, <i>Gardenia jasminoides</i> (pink bkgrd)	Rubiaceae	Fl A
3170	(90c)	Gardenia, <i>Gardenia jasminoides</i> (green bkgrd)	Rubiaceae	Fl A
3170a		Bklt/10+10 stickers (5ea Sc#3169–70) (die cut 13½) (s/a)		
CHINA (Taiwan) 2018 October 31 (Taichung World Flora Exposition) (Set/4 & SS/3)				
4442	\$6	Lily, <i>Lilium</i> sp.	Liliaceae	Fl U A
4443	\$8	Oncidium Orchid, <i>Oncidium</i> sp.	Orchidaceae	Fl U A
4444	\$9	Gladioli, <i>Gladiolus</i> sp.	Iridaceae	Fl U A
4445	\$28	Flamingo Flower, <i>Anthurium andraeanum</i>	Araceae	Fl A
4446a	SS \$13	Lily, <i>Lilium</i> sp. (w/ leopard cat mascot)	Liliaceae	Fl U B SS
4446b	SS \$15	Hygrophila, <i>Hygrophila</i> sp. (w/ leopard kitten mascot)	Acanthaceae	Fl U B SS
4446c	SS \$17	Butterfly Orchid (w/ leopard cat mascot)	Orchidaceae	Fl U B SS
CHINA (People's Republic) 2018 July 14 (Fruit) (Set/4)				
4556	\$1.20	Pineapples, <i>Ananas comosus</i>	Bromeliaceae	Fr A
4557	\$1.20	Cherries, <i>Prunus avium</i>	Rosaceae	Fr A
4558	\$1.20	Mangos, <i>Mangifera indica</i>	Anacardiaceae	Fr A
4559	\$1.50	Oranges, <i>Citrus sinensis</i>	Rutaceae	Fr A
ECUADOR 2018 August 29 (12th Latin American Botanical Congress) (SS/1)				
2219	SS \$4	U/I Cactus (w/ hummingbird) (also on bkgrd)		Fl V U Z SS
2018 December 11 (Scientific Contrib. San Francisco Univ.) (MS/9)				
2224d	\$1	<i>Tiputinia foetida</i>	Burmanniaceae	Fl A MS
2224f	\$1.50	<i>Vaccinium floribundum</i>	Ericaceae	Fr A MS

FINLAND		2018 May 9 (Flowers of Happiness) (Horiz strip/5)		
1565a	(€1.50)	Gerbera Daisies, <i>Gerbera × hybrida</i>	Asteraceae	Fl A
1565b	(€1.50)	Daisies, <i>Leucanthemum vulgare</i>	Asteraceae	Fl B
		Harebells, <i>Campanula rotundifolia</i>	Campanulaceae	Fl B
1565c	(€1.50)	Veitch's Peony, <i>Paeonia anomala</i> ssp. <i>veitchii</i>	Paeoniaceae	Fl A
1565d	(€1.50)	Hydrangeas, <i>Hydrangea</i> sp.	Hydrangeaceae	Fl U A
1565e	(€1.50)	Poppies, <i>Papaver rhoeas</i>	Papaveraceae	Fl A
		2018 September 12 (Finnish National Flora & Fauna) (Horiz strip/5)		
1571d	(€1.50)	Lily-of-the-Valley, <i>Convallaria majalis</i>	Asparagaceae	Fl A
		2018 November 7 (Rowanberries) (Single)		
1574	(€1.50)	Rowanberries, <i>Sorbus aucuparia</i> (in snow)	Rosaceae	Fr A
GERMANY		2018 December 18 (Flower Type of 2005) (Single & 3ea Bklt/10)		
3058	15c	Cuckoo Flower, <i>Cardamine pratensis</i> (perf 14)	Brassicaceae	Fl A
3060	10c	Winter Aconite or Winterling, <i>Eranthis hyemalis</i>	Ranunculaceae	Fl A
3060a		Bklt/10 (die cut 10¼×10) (s/a)		
3061	15c	Cuckoo Flower, or Wiesenschaumkraut, <i>Cardamine pratensis</i>	Brassicaceae	Fl A
3061a		Bklt/10 (die cut 10¼×10) (s/a)		
3062	20c	Bluebells or Hasenglöckchen, <i>Hyacinthoides non-scripta</i>	Asparagaceae	Fl A
3062a		Bklt/10 (die cut 10¼×10) (s/a)		
		2019 January 2 (Ptg. by Caspar David Friedrich) (Single)		
3079	145c	U/I tree (<i>The Lonely Tree</i>)		T U A
		2019 March 1 (Flower Type of 2005) (Single)		
3085	120c	Grape Hyacinth or Traubenhyazinthe, <i>Muscari armeniacum</i>	Asparagaceae	Fl A
GREAT BRITAIN		2019 February 13 (Drawings of Leonardo da Vinci) (Set/12)		
3804	(67p)	Guelder Rose, <i>Viburnum opulus</i>	Adoxaceae	Fl A
3806	(67p)	Star of Bethlehem, <i>Ornithogalum umbellatum</i> (w/ other plants)	Asparagaceae	Fl A
3808a		Horiz Strip/6 (Sc#3803–08)		
3813a		Bklt/4 (Sc#3804–06, 3813)		
GRENADA		2018 October 10 (Tropical Fruit) (MS/4 & SS/2)		
4302a	\$5	Tamarinds, <i>Tamarindus indicus</i>	Fabaceae	Fr A MS
4302b	\$5	Passion Fruit, <i>Passiflora edulis</i>	Passifloraceae	Fr A MS
4302c	\$6	Mangos, <i>Mangifera indica</i>	Anacardiaceae	Fr A MS
4302d	\$6	Starfruit, <i>Averrhoa carambola</i>	Oxalidaceae	Fr A MS
4303a	SS \$8	Guavas, <i>Psidium guajava</i>	Myrtaceae	Fr A SS
4303b	SS \$8	Soursops, <i>Annona muricata</i>	Annonaceae	Fr A SS
INDIA		2018 January 8 (Central Plantation Crops Research Inst) (Set/2 & SS/2)		
2990	5r	Coconuts, <i>Cocos nucifera</i> (perf 13)	Arecaceae	Fr A
2990a	5r	Same species (syncopated perf 13)	Arecaceae	Fr A
2991b		SS/2 (Sc#2990a & 2991a)		
INDONESIA		2016 September 24 (Spices) (Vert Strip/4)		
2450a	3000r	Nutmeg & Mace, <i>Myristica fragrans</i>	Myristicaceae	Fr A
2450b	3000r	Indonesian Cinnamon, <i>Cinnamomum burmannii</i>	Lauraceae	V A
2450c	3000r	Pepper, <i>Piper nigrum</i>	Piperaceae	Fr A
2450d	3000r	Cloves, <i>Syzygium aromaticum</i>	Myrtaceae	Fr A

INDONESIA (continued)		2017 May 18 (200th anniv. Bogor Botanical Garden) (Sheet/34 & SS/1)		
2462a	3000r	<i>Coelogyne mayeriana</i>	Orchidaceae	Fl A
2462b	3000r	<i>Vanda sumatrana</i>	Orchidaceae	Fl A
2462c	3000r	<i>Cymbidium ensifolium</i>	Orchidaceae	Fl A
2462d	3000r	<i>Coelogyne rochussenii</i>	Orchidaceae	Fl A
2462e	3000r	<i>Aerides odorata</i>	Orchidaceae	Fl A
2462f	3000r	<i>Bulbophyllum flabellum-veneris</i>	Orchidaceae	Fl A
2462g	3000r	<i>Paphiopedilum tonsum</i>	Orchidaceae	Fl A
2462h	3000r	<i>Papilionanthe hookeriana</i>	Orchidaceae	Fl A
2462i	3000r	<i>Bulbophyllum medusae</i>	Orchidaceae	Fl A
2462j	3000r	<i>Phalaenopsis cornu-cervi</i>	Orchidaceae	Fl A
2462k	3000r	<i>Dendrobium crumenatum</i>	Orchidaceae	Fl A
2462l	3000r	<i>Phalaenopsis javanica</i>	Orchidaceae	Fl A
2462m	3000r	<i>Rhynchostylis retusa</i>	Orchidaceae	Fl A
2462n	3000r	<i>Thrixspermum centipeda</i>	Orchidaceae	Fl A
2462o	3000r	<i>Vanda tricolor</i>	Orchidaceae	Fl A
2462p	3000r	<i>Acanthephippium javanicum</i>	Orchidaceae	Fl A
2462q	3000r	<i>Dendrobium secundum</i>	Orchidaceae	Fl A
2462r	3000r	<i>Vanda limbata</i>	Orchidaceae	Fl A
2462s	3000r	<i>Vanda insignis</i>	Orchidaceae	Fl A
2462t	3000r	<i>Bulbophyllum beccarii</i>	Orchidaceae	Fl A
2462u	3000r	<i>Coelogyne pandurata</i>	Orchidaceae	Fl A
2462v	3000r	<i>Paphiopedilum supardii</i>	Orchidaceae	Fl A
2462w	3000r	<i>Phalaenopsis gigantea</i>	Orchidaceae	Fl A
2462x	3000r	<i>Paraphalaenopsis labukensis</i>	Orchidaceae	Fl A
2462y	3000r	<i>Aerides huttonii</i>	Orchidaceae	Fl A
2462z	3000r	<i>Grammatophyllum scriptum</i>	Orchidaceae	Fl A
2462aa	3000r	<i>Dendrobium anosmum</i>	Orchidaceae	Fl A
2462ab	3000r	<i>Dendrobium smillieae</i>	Orchidaceae	Fl A
2462ac	3000r	<i>Dendrobium utile</i>	Orchidaceae	Fl A
2462ad	3000r	<i>Dendrobium bracteosum</i>	Orchidaceae	Fl A
2462ae	3000r	<i>Bulbophyllum graveolens</i>	Orchidaceae	Fl A
2462af	3000r	<i>Dendrobium macrophyllum</i>	Orchidaceae	Fl A
2462ag	3000r	<i>Paphiopedilum glanduliferum</i>	Orchidaceae	Fl A
2462ah	3000r	<i>Grammatophyllum speciosum</i>	Orchidaceae	Fl A
2463	SS 20000r	<i>Coelogyne marthae</i>	Orchidaceae	Fl A SS
		2017 August 8 (50th anniv. ASEAN) (Single)		
2469	5000r	Arabian Jasmine, <i>Jasminum sambac</i>	Oleaceae	Fl A
		2017 October 16 (Fruit) (Block/4 & MS/4)		
2473a	3000r	Rambutan, <i>Nephelium lappaceum</i>	Sapindaceae	Fr A
2473b	3000r	Mangosteen, <i>Garcinia mangostana</i>	Clusiaceae	Fr A
2473c	3000r	Coconuts, <i>Cocos nucifera</i>	Arecaceae	Fr A
2473d	3000r	Yellow Durian, <i>Durio graveolens</i>	Malvaceae	Fr A
2474a	5000r	Rambutan, <i>Nephelium lappaceum</i>	Sapindaceae	Fr A
2474b	5000r	Mangosteen, <i>Garcinia mangostana</i>	Clusiaceae	Fr A
2474c	5000r	Coconuts, <i>Cocos nucifera</i>	Arecaceae	Fr A
2474d	5000r	Yellow Durian, <i>Durio graveolens</i>	Malvaceae	Fr A
ISRAEL		2018 December 4 (Trees) (Set/3 w/ tabs)		
2205	2.50s	Judas Tree, <i>Cercis siliquastrum</i>	Fabaceae	T A
2206	2.50s	Mount Tabor Oak, <i>Quercus ithaburensis</i>	Fagaceae	T A
2207	2.50s	Greek Strawberry Tree, <i>Arbutus andrachne</i>	Ericaceae	T A

JAPAN**2018, June 1** (Summer Greetings) (MS/10)

4208e 62¥ Watermelon, *Citrullus lanatus* Cucurbitaceae Fr A

2018, June 6 (69th National Plantation Festival) (MS/10)

4210a 62¥ Rhododendrons, *Rhododendron* sp. Ericaceae Fl U A
 4210b 62¥ Day Lilies, *Hemerocallis* sp. Xanthorrhaceae Fl U A
 4210c 62¥ Peach blossoms, *Prunus persica* Rosaceae Fl A
 4210d 62¥ Arrowleaf False Pickerelweed, *Monochoria hastata* Pontederiaceae Fl A
 4210e 62¥ Japanese Black Pine, *Pinus thunbergii* Pinaceae Fr A
 4210f 62¥ Mountain Cherry blossoms, *Prunus serotina* Rosaceae Fl A
 4210g 62¥ Weeping Cherry blossoms, *Prunus pendula* Rosaceae Fl A
 4210h 62¥ Itajii Chinquapin, *Castanopsis sieboldii* Fagaceae Fl A
 4210i 62¥ Japanese Zelkova, *Zelkova serrata* Ulmaceae Fl A
 4210j 62¥ Yeddo Hawthorn, *Raphiolepis indica* var. *umbellata* Rosaceae Fl A

2018, June 13 (Greetings: Flowers in Daily Life) (2ea MS/10)

4211a-j 62¥ Stylized flowers Fl S
 4212a-j 82¥ Stylized flowers Fl S

2018 August 23 (Autumn Greetings) (2ea MS/10)

4225a 62¥ Red Maple leaves, *Acer* sp. Sapindaceae V U A
 4225c 62¥ Grapes, *Vitis vinifera* Vitaceae Fr A
 4225d 62¥ U/I blossoms on tree branch Fl U A
 4225f 62¥ U/I leaves changing color V U A
 4225g 62¥ U/I red, yellow, and orange leaves V U A
 4225h 62¥ U/I flowers & leaves V U A
 4225j 62¥ Acorns, *Quercus* sp. Fagaceae Fr A
 4225 Margin Bkgrd: *Ginkgo biloba* (leaf silhouettes) Ginkgoaceae V Z MS
 4226b 82¥ Red Maple tree, *Acer* sp. Sapindaceae T A
 4226c 82¥ U/I flowers Fl U A
 4226f 82¥ U/I leaves V U A
 4226g 82¥ Chestnuts, *Castanea crenata* Fagaceae Fr A
 4226h 82¥ Pumpkin soup, *Cucurbita pepo* Cucurbitaceae Fr A
 4226i 82¥ Gourds, *Cucurbita pepo* Cucurbitaceae Fr A
 4226j 82¥ U/I flowers Fl U A
 4226 Margin Bkgrd: *Acer* sp. (leaf silhouettes) Sapindaceae V Z MS

2018 October 9 (Intl. Letter Writing Week/Art by Hiroshige) (Vert Pair)

4242 70¥ Camellia, *Camellia japonica* (*Camellias with Small Birds*) Theaceae Fl A
 4243 70¥ Camellia, *Camellia japonica* (*Camellias with Small Birds*) Theaceae Fl B
 4243a Vert Pair (Sc#4242-43)

2018 October 17 (Gifts from the Forest Series 2) (2ea MS/10)

4247a 62¥ Stylized fruit hanging from tree Fr S
 4247c 62¥ Stylized berries Fr S
 4247d 62¥ Stylized flowers Fl S
 4248a 82¥ Stylized flowers, *Camellia japonica* Theaceae Fl S
 4248b 82¥ Stylized flowers Fl S
 4248d 82¥ Stylized flowers & tree Fl T S
 4248g 82¥ Stylized vine V S
 4248h 82¥ Stylized berries Fr S

2018 November 14 (Winter Greetings) (2ea MS/10)

4257a-j 62¥ U/I flowers & fruit in glass containers Fl Fr U A
 4258a-j 82¥ U/I flowers & fruit in glass containers Fl Fr U A

JAPAN (continued)		2018 December 14 (2ea MS/10)			
4267a	62¥	Tulips, <i>Tulipa × hybrida</i>	Liliaceae	Fl	B
		Sweet Peas, <i>Lathyrus odoratus</i>	Fabaceae	Fl	B
4267b	62¥	Roses, <i>Rosa × hybrida</i>	Rosaceae	Fl	A
4267c	62¥	Narcissus, <i>Narcissus poeticus</i>	Amaryllidaceae	Fl	A
4267d	62¥	Adonis, <i>Adonis annua</i>	Ranunculaceae	Fl	A
4267e	62¥	Snowdrops, <i>Galanthus nivalis</i>	Amaryllidaceae	Fl	A
4268a	82¥	Cherry blossoms, <i>Prunus mume</i>	Rosaceae	Fl	A
4268b	82¥	Roses, <i>Rosa × hybrida</i>	Rosaceae	Fl	A
4268c	82¥	Fuchsias, <i>Fuchsia</i> sp.	Onagraceae	Fl	U A
4268d	82¥	Nemophila or Baby Blue Eyes, <i>Nemophila menziesii</i>	Boraginaceae	Fl	A
4268e	82¥	Christmas Roses, <i>Helleborus niger</i>	Ranunculaceae	Fl	A
KAZAKHSTAN		2018 October 26 (Endangered Trees) (SS/2)			
875a	SS 250te	Wild Apricot, <i>Prunus armeniaca</i> (= <i>Armeniaca vulgaris</i>)	Rosaceae	Fr	A SS
875b	SS 300te	<i>Prunus</i> (= <i>Louiseania</i>) <i>ulmifolia</i>	Rosaceae	Fr	A SS
KOREA (South)		2018 June 25 (Nature in the Demilitarized Zone) (Pair)			
2523a	330w	U/I flowers sprouting through crack in army helmet		Fl	U B
KYRGYZSTAN		2018 October 13 (Roses) (Set/4 & SS/4)			
582	20s	Indigoletta Hybrid Tea Roses, <i>Rosa × hybrida</i>	Rosaceae	Fl	A
583	48s	Nicole Roses, <i>Rosa × hybrida</i>	Rosaceae	Fl	A
584	55s	Floribunda Roses, <i>Rosa × hybrida</i>	Rosaceae	Fl	A
585	83s	Damask Roses, <i>Rosa × damascena</i>	Rosaceae	Fl	A
585a		SS/4 (Sc#582–85)			
LEBANON		2018 November 19 (75th anniv. Independence) (Single)			
801	£10000	Cedar Tree, <i>Cedrus libani</i>	Pinaceae		T A
LUXEMBOURG		2018 December 4 (Plum Varieties) (Bklt/10)			
1504	(95c)	Wénkelcher, <i>Prunus domestica</i>	Rosaceae	Fr	A
1505	(95c)	Koupanz, <i>Prunus domestica</i>	Rosaceae	Fr	A
1506	(95c)	Duederer, <i>Prunus domestica</i>	Rosaceae	Fr	A
1507	(95c)	Prenzenpromm, <i>Prunus domestica</i>	Rosaceae	Fr	A
1508	(95c)	Karschnatzpromm, <i>Prunus domestica</i>	Rosaceae	Fr	A
1508a		Bklt/10 (2ea Sc#1504–08)			
		2018 December 4 (Grape Varieties of the Moselle Region) (Set/4)			
B518	70c+5c	Riesling, <i>Vitis vinifera</i>	Vitaceae	Fr	A
B519	95c+10c	Pinot Gris, <i>Vitis vinifera</i>	Vitaceae	Fr	A
B520	€1.30+10c	Rivaner, <i>Vitis vinifera</i>	Vitaceae	Fr	A
B521	€1.40+25c	Auxerrois, <i>Vitis vinifera</i>	Vitaceae	Fr	A
MACAO		2018 October 9 (Birdsong & Flower Scents) (Block/4 & SS/1)			
1537	2p	Apricot blossoms, <i>Prunus armeniaca</i>	Rosaceae	Fl	A
1538	3p	U/I flowers		Fl	U A
1539	4.50p	Peonies, <i>Paeonia</i> sp.	Paeoniaceae	Fl	A
1540	5.50p	U/I flowers		Fl	U B
1541	SS 12p	U/I flowers		Fl	U B SS
MALAYSIA (Kedah)		2018 December 4 (Wild Orchids, Arms, & Portrait) (MS/6)			
213a	5c	Greenish Bulbophyllum, <i>Bulbophyllum virescens</i>	Orchidaceae	Fl	A MS
213b	10c	<i>Corybas carinatus</i>	Orchidaceae	Fl	A MS
213c	20c	Griffith's Vanilla, <i>Vanilla griffithii</i>	Orchidaceae	Fl	A MS
213d	30c	Almost-Three Lobed Phaius, <i>Phaius subtrilobus</i>	Orchidaceae	Fl	A MS

MALAYSIA (Kedah) (continued)

213e	40c	<i>Dendrobium macrophyllum</i> var. <i>ternatense</i>	Orchidaceae	Fl A MS
213f	50c	<i>Anoectochilus reinwardtii</i>	Orchidaceae	Fl A MS

MALAYSIA (Kelantan) **2018 December 4** (Wild Orchids, Arms, & Portrait) (MS/6)

137a	5c	Greenish Bulbophyllum, <i>Bulbophyllum virescens</i>	Orchidaceae	Fl A MS
137b	10c	<i>Corybas carinatus</i>	Orchidaceae	Fl A MS
137c	20c	Griffith's Vanilla, <i>Vanilla griffithii</i>	Orchidaceae	Fl A MS
137d	30c	Almost-Three Lobed Phaius, <i>Phaius subtrilobus</i>	Orchidaceae	Fl A MS
137e	40c	<i>Dendrobium macrophyllum</i> var. <i>ternatense</i>	Orchidaceae	Fl A MS
137f	50c	<i>Anoectochilus reinwardtii</i>	Orchidaceae	Fl A MS

MALAYSIA (Malacca) **2018 December 4** (Wild Orchids, Arms, & Portrait) (MS/6)

101a	5c	Greenish Bulbophyllum, <i>Bulbophyllum virescens</i>	Orchidaceae	Fl A MS
101b	10c	<i>Corybas carinatus</i>	Orchidaceae	Fl A MS
101c	20c	Griffith's Vanilla, <i>Vanilla griffithii</i>	Orchidaceae	Fl A MS
101d	30c	Almost-Three Lobed Phaius, <i>Phaius subtrilobus</i>	Orchidaceae	Fl A MS
101e	40c	<i>Dendrobium macrophyllum</i> var. <i>ternatense</i>	Orchidaceae	Fl A MS
101f	50c	<i>Anoectochilus reinwardtii</i>	Orchidaceae	Fl A MS

MALAYSIA (Negri Sembilan) **2018 December 4** (Wild Orchids, Arms, & Portrait) (MS/6)

120a	5c	Greenish Bulbophyllum, <i>Bulbophyllum virescens</i>	Orchidaceae	Fl A MS
120b	10c	<i>Corybas carinatus</i>	Orchidaceae	Fl A MS
120c	20c	Griffith's Vanilla, <i>Vanilla griffithii</i>	Orchidaceae	Fl A MS
120d	30c	Almost-Three Lobed Phaius, <i>Phaius subtrilobus</i>	Orchidaceae	Fl A MS
120e	40c	<i>Dendrobium macrophyllum</i> var. <i>ternatense</i>	Orchidaceae	Fl A MS
120f	50c	<i>Anoectochilus reinwardtii</i>	Orchidaceae	Fl A MS

MALAYSIA (Pahang) **2018 December 4** (Wild Orchids, Arms, & Portrait) (MS/6)

129a	5c	Greenish Bulbophyllum, <i>Bulbophyllum virescens</i>	Orchidaceae	Fl A MS
129b	10c	<i>Corybas carinatus</i>	Orchidaceae	Fl A MS
129c	20c	Griffith's Vanilla, <i>Vanilla griffithii</i>	Orchidaceae	Fl A MS
129d	30c	Almost-Three Lobed Phaius, <i>Phaius subtrilobus</i>	Orchidaceae	Fl A MS
129e	40c	<i>Dendrobium macrophyllum</i> var. <i>ternatense</i>	Orchidaceae	Fl A MS
129f	50c	<i>Anoectochilus reinwardtii</i>	Orchidaceae	Fl A MS

MALAYSIA (Penang) **2018 December 4** (Wild Orchids, Arms, & Portrait) (MS/6)

101a	5c	Greenish Bulbophyllum, <i>Bulbophyllum virescens</i>	Orchidaceae	Fl A MS
101b	10c	<i>Corybas carinatus</i>	Orchidaceae	Fl A MS
101c	20c	Griffith's Vanilla, <i>Vanilla griffithii</i>	Orchidaceae	Fl A MS
101d	30c	Almost-Three Lobed Phaius, <i>Phaius subtrilobus</i>	Orchidaceae	Fl A MS
101e	40c	<i>Dendrobium macrophyllum</i> var. <i>ternatense</i>	Orchidaceae	Fl A MS
101f	50c	<i>Anoectochilus reinwardtii</i>	Orchidaceae	Fl A MS

MALAYSIA (Perak) **2018 December 4** (Wild Orchids, Arms, & Portrait) (MS/6)

186a	5c	Greenish Bulbophyllum, <i>Bulbophyllum virescens</i>	Orchidaceae	Fl A MS
186b	10c	<i>Corybas carinatus</i>	Orchidaceae	Fl A MS
186c	20c	Griffith's Vanilla, <i>Vanilla griffithii</i>	Orchidaceae	Fl A MS
186d	30c	Almost-Three Lobed Phaius, <i>Phaius subtrilobus</i>	Orchidaceae	Fl A MS
186e	40c	<i>Dendrobium macrophyllum</i> var. <i>ternatense</i>	Orchidaceae	Fl A MS
186f	50c	<i>Anoectochilus reinwardtii</i>	Orchidaceae	Fl A MS

MALAYSIA (Perlis) **2018 December 4** (Wild Orchids, Arms, & Portrait) (MS/6)

83a	5c	Greenish Bulbophyllum, <i>Bulbophyllum virescens</i>	Orchidaceae	Fl A MS
83b	10c	<i>Corybas carinatus</i>	Orchidaceae	Fl A MS
83c	20c	Griffith's Vanilla, <i>Vanilla griffithii</i>	Orchidaceae	Fl A MS

MALAYSIA (Perlis) (continued)

83d	30c	Almost-Three Lobed Phaius, <i>Phaius subtrilobus</i>	Orchidaceae	Fl A MS
83e	40c	<i>Dendrobium macrophyllum</i> var. <i>ternatense</i>	Orchidaceae	Fl A MS
83f	50c	<i>Anoectochilus reinwardtii</i>	Orchidaceae	Fl A MS

MALAYSIA (Sabah) **2018 December 4** (Wild Orchids, Arms, & Portrait) (MS/6)

52a	5c	Greenish Bulbophyllum, <i>Bulbophyllum virescens</i>	Orchidaceae	Fl A MS
52b	10c	<i>Corybas carinatus</i>	Orchidaceae	Fl A MS
52c	20c	Griffith's Vanilla, <i>Vanilla griffithii</i>	Orchidaceae	Fl A MS
52d	30c	Almost-Three Lobed Phaius, <i>Phaius subtrilobus</i>	Orchidaceae	Fl A MS
52e	40c	<i>Dendrobium macrophyllum</i> var. <i>ternatense</i>	Orchidaceae	Fl A MS
52f	50c	<i>Anoectochilus reinwardtii</i>	Orchidaceae	Fl A MS

MALAYSIA (Sarawak) **2018 December 4** (Wild Orchids, Arms, & Portrait) (MS/6)

275a	5c	Greenish Bulbophyllum, <i>Bulbophyllum virescens</i>	Orchidaceae	Fl A MS
275b	10c	<i>Corybas carinatus</i>	Orchidaceae	Fl A MS
275c	20c	Griffith's Vanilla, <i>Vanilla griffithii</i>	Orchidaceae	Fl A MS
275d	30c	Almost-Three Lobed Phaius, <i>Phaius subtrilobus</i>	Orchidaceae	Fl A MS
275e	40c	<i>Dendrobium macrophyllum</i> var. <i>ternatense</i>	Orchidaceae	Fl A MS
275f	50c	<i>Anoectochilus reinwardtii</i>	Orchidaceae	Fl A MS

MALAYSIA (Selangor) **2018 December 4** (Wild Orchids, Arms, & Portrait) (MS/6)

158a	5c	Greenish Bulbophyllum, <i>Bulbophyllum virescens</i>	Orchidaceae	Fl A MS
158b	10c	<i>Corybas carinatus</i>	Orchidaceae	Fl A MS
158c	20c	Griffith's Vanilla, <i>Vanilla griffithii</i>	Orchidaceae	Fl A MS
158d	30c	Almost-Three Lobed Phaius, <i>Phaius subtrilobus</i>	Orchidaceae	Fl A MS
158e	40c	<i>Dendrobium macrophyllum</i> var. <i>ternatense</i>	Orchidaceae	Fl A MS
158f	50c	<i>Anoectochilus reinwardtii</i>	Orchidaceae	Fl A MS

MALAYSIA (Trengganu) **2018 December 4** (Wild Orchids, Arms, & Portrait) (MS/6)

126a	5c	Greenish Bulbophyllum, <i>Bulbophyllum virescens</i>	Orchidaceae	Fl A MS
126b	10c	<i>Corybas carinatus</i>	Orchidaceae	Fl A MS
126c	20c	Griffith's Vanilla, <i>Vanilla griffithii</i>	Orchidaceae	Fl A MS
126d	30c	Almost-Three Lobed Phaius, <i>Phaius subtrilobus</i>	Orchidaceae	Fl A MS
126e	40c	<i>Dendrobium macrophyllum</i> var. <i>ternatense</i>	Orchidaceae	Fl A MS
126f	50c	<i>Anoectochilus reinwardtii</i>	Orchidaceae	Fl A MS

MALAYSIA (Wilayah Persekutuan) **2018 December 4** (Wild Orchids, Arms, & Portrait) (MS/6)

21a	5c	Greenish Bulbophyllum, <i>Bulbophyllum virescens</i>	Orchidaceae	Fl A MS
21b	10c	<i>Corybas carinatus</i>	Orchidaceae	Fl A MS
21c	20c	Griffith's Vanilla, <i>Vanilla griffithii</i>	Orchidaceae	Fl A MS
21d	30c	Almost-Three Lobed Phaius, <i>Phaius subtrilobus</i>	Orchidaceae	Fl A MS
21e	40c	<i>Dendrobium macrophyllum</i> var. <i>ternatense</i>	Orchidaceae	Fl A MS
21f	50c	<i>Anoectochilus reinwardtii</i>	Orchidaceae	Fl A MS

MALDIVIVE ISLANDS**2016 September 8** (International Year of Pulses) (MS/4 & SS/1)

3727b	20r	Beans, <i>Phaseolus vulgaris</i> (in bowl)	Fabaceae	Fr A MS
3727c	20r	Peas, <i>Pisum sativum</i> (w/ spoon)	Fabaceae	Fr A MS
3737	SS 60r	Hand sorting beans	Fabaceae	Fr U B SS

2016 September 8 (Post-impressionist Art) (MS/4)

3749a	20r	Irises, <i>Iris</i> sp. (Ptg: <i>Irises</i> by van Gogh)	Iridaceae	Fl A MS
3749d	20r	U/I citrus, <i>Citrus</i> sp. (Ptg: <i>Still Life with a Curtain</i> by Cézanne)	Rutaceae	Fr U B MS

MEXICO**2018 August 14** (Flora of Mexico) (Single)

3111	7.50p	Monkey's Hand Tree, <i>Chiranthodendron pentadactylon</i>	Malvaceae	Fl V A
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MOLDOVA		2018 September 6 (2018 World Capital of Wine Tourism) (Single)		
997	5.75l	Grapes, <i>Vitis vinifera</i> (w/ vineyard)	Vitaceae	Fr V B
MOROCCO		2017 August 16 (Cork Oak) (Single)		
1235	9d	Cork oak, <i>Quercus suber</i>	Fagaceae	T A
		2018 August 9 (Flora & Fauna) (Horiz Pair)		
1254b	3.75d	Lavender flowers, <i>Lavandula angustifolia</i>	Lamiaceae	Fl A
		2009 September 1 (Postage Due: Bananas) (Single)		
J24	3.25d	Bananas, <i>Musa × paradisiaca</i>	Musaceae	Fr A
NETHERLANDS		2018 April 9 (Wild Flowers) (MS/10)		
1567a	(83c)	Fluitenkruid or Cow Parsley, <i>Anthriscus sylvestris</i>	Apiaceae	Fl A
1567b	(83c)	Hazenpootje or Hare's-foot Clover, <i>Trifolium arvense</i>	Fabaceae	Fl A
1567c	(83c)	Wondklaver or Woundwort, <i>Anthyllis vulneraria</i>	Fabaceae	Fl A
1567d	(83c)	Madelietje or Common Daisy, <i>Leucanthemum vulgare</i>	Asteraceae	Fl A
1567e	(83c)	Gewone Ossentong or Common Bugloss, <i>Anchusa officinalis</i>	Boraginaceae	Fl A
1567f	(83c)	Pinksterbloem or Lady's Smock, <i>Cardamine pratensis</i>	Brassicaceae	Fl A
1567g	(83c)	Trilgras or Quaking Grass, <i>Briza media</i>	Poaceae	Fl A
1567h	(83c)	Paarse Morgenster or Purple Salsify, <i>Tragopogon porrifolius</i>	Asteraceae	Fl A
1567i	(83c)	Paardeenbloem or Dandelion, <i>Taraxacum campylodes</i>	Asteraceae	Fl A
1567j	(83c)	Smalle Weegbree or Narrowleaf Plantain, <i>Plantago lanceolata</i>	Plantaginaceae	Fl A
NEVIS		2018 December 5 (Christmas) (Set/4 & SS/1)		
1972	30c	Holly, <i>Ilex aquifolium</i>	Aquifoliaceae	Fr V A
NEW ZEALAND		2019 February 13 (Native Alpine Flowers) (Set/6 & SS/6)		
2839	\$1.20	Mountain Buttercups, <i>Ranunculus insignis</i>	Ranunculaceae	Fl A
2840	\$1.20	Penwiper Plant, <i>Notothlapsi rosulatum</i>	Brassicaceae	Fl A
2841	\$1.20	Black Scree Button Daisies, <i>Leptinella atrata</i>	Asteraceae	Fl A
2842	\$2.40	Woollyheads, <i>Craspedia incana</i>	Asteraceae	Fl A
2843	\$3	Mt. Cook Lilies, <i>Ranunculus lyallii</i>	Ranunculaceae	Fl A
2844	\$3.60	Moss-dwelling Forget-me-nots, <i>Myosotis bryonoma</i>	Boraginaceae	Fl A
2844a		SS/6 (Sc#2839–44)		
PALAU		2018 November 30 (Frangipani Flowers) (MS/4)		
1395a	\$2	Plumeria or Frangipani, <i>Plumeria rubra</i> (bunch w/ white petals)	Apocynaceae	Fl A MS
1395b	\$2	Same species (bunch w/ pink petals)	Apocynaceae	Fl A MS
1395c	\$2	Same species (single w/ pink petals)	Apocynaceae	Fl A MS
1395d	\$2	Same species (two w/ white petals)	Apocynaceae	Fl A MS
		Cap: <i>P. rubra</i> , but some are distinctly <i>P. alba</i>		
POLAND		2018 November 11 (Centenary End of WWI) (Single)		
4377	2.60z	Poppies in grenade, <i>Papaver rhoeas</i>	Papaveraceae	Fl A
SOUTH AFRICA		2008 June 30 (Flower Type of 2000) (Coil PSA die cut 12¾×14)		
1391A	(1.40r)	Botterblom, <i>Gazania krebsiana</i>	Asteraceae	Fl A
1391B	(1.40r)	Blue Marguerite, <i>Felicia amelloides</i>	Asteraceae	Fl A
1391C	(1.40r)	Karoo Violet, <i>Aptosimum procumbens</i>	Scrophulariaceae	Fl A
1391G	(1.40r)	Blue Marguerite, <i>Felicia amelloides</i>	Asteraceae	Fl A
1391I	(1.40r)	Tree Pelargonium, <i>Pelargonium cucullatum</i>	Geraniaceae	Fl A
1391J	(1.40r)	Black-eyed Susan, <i>Thunbergia alata</i>	Acanthaceae	Fl A
UNITED STATES		2019 January 17 (New Year: Year of the Boar) (Single)		
5340	(50c)	Peach blossom, <i>Prunus persica</i>	Rosaceae	Fl A

UNITED STATES (continued)		2019 January 27 (American Landmarks) (Single)		
5347	\$7.35	Joshua Tree, <i>Yucca brevifolia</i>	Asparagaceae	V A
		2019 February 15 (Cactus Flowers) (Bklt/20)		
5350	(55c)	Cow's Tongue Cactus, <i>Opuntia engelmannii</i>	Cactaceae	FI A
5351	(55c)	<i>Rebutia minuscula</i>	Cactaceae	FI A
5352	(55c)	Texas Rainbow Cactus, <i>Echinocereus dasyacanthus</i>	Cactaceae	FI A
5353	(55c)	Dahlia Cactus, <i>Echinocereus poselgeri</i>	Cactaceae	FI A
5354	(55c)	Scarlet Hedgehog Cactus, <i>Echinocereus coccineus</i>	Cactaceae	FI A
5355	(55c)	False Peyote or Peyotillo, <i>Pelecyphora aselliformis</i>	Cactaceae	FI A
5356	(55c)	<i>Parodia microsperma</i>	Cactaceae	FI A
5357	(55c)	Turk's Head Cactus, <i>Echinocactus horizonthalonius</i>	Cactaceae	FI A
5358	(55c)	<i>Thelocactus heterochromus</i>	Cactaceae	FI A
5359	(55c)	Silver Ball Cactus, <i>Parodia scopa</i>	Cactaceae	FI A
5359a		Block/10 (Sc#5350–59)		
5359b		Bklt/20 (2ea Sc#5350–59)		
UZBEKISTAN		2018 August 6 (Flora & Fauna of Zomin Nature Reserve) (MS/8)		
861c	1800s	Juniper, <i>Juniperus semiglobosa</i>	Cupressaceae	T A MS
861e	2800s	Foxtail Lily, <i>Eremurus chloranthus</i>	Asphodelaceae	FI A MS
861g	3400s	<i>Ziziphora</i> sp.	Lamiaceae	FI U A MS

Flora
&
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COLUMBIA WILDLIFE REFUGE

Lisa D. Foster, Washington

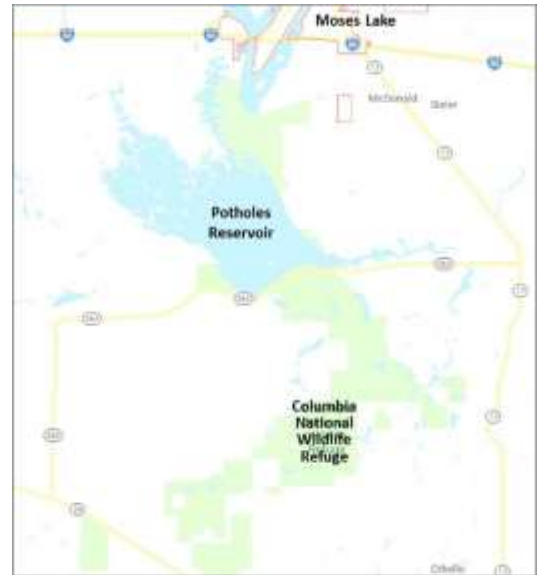
On Sunday morning 7 April 2019, following the John D. Arn Philatelic Symposium at Moses Lake, Washington, we drove 22 miles south to visit the Columbia National Wildlife Refuge in search of Sandhill Cranes. The Arn Symposium is an annual event sponsored in part by the Northwest Federation of Stamp Clubs featuring speakers from the Pacific Northwest making presentations on a variety of philatelic subjects.

Every spring thousands of Sandhill Cranes (*Antigone canadensis*) migrate through Central Washington on their way to breeding grounds in Southern Alaska. Although we did not see any up close, we could hear them calling as they flew overhead.



Antigone canadensis
Canada, 1999, Sc#1773

We began our birding adventure at the Drumheller Channels Overlook, a National Natural Landmark. Around 13,000 years ago dozens of megafloods carved their way through the basalt rock to form the Drumheller Channels. They were beautiful and reminded us of a smaller version of the Grand Canyon. The callings of multiple birds around us made us think we had said, “Alexa play bird sounds.”



Drumheller Channels

We drove onward to an area overlooking Royal Lake in search of waterfowl and roosting cranes. From there we drove two miles to the Frog Lake parking area where a large lava pillar stood, taken from the surrounding columns.



Agelaius phoeniceus
USA, 1987, Sc#2303

We walked along the Marsh loop Trail where we saw an abundance of Red-winged Blackbirds (*Agelaius phoeniceus*). If you have not yet visited this magnificent area, I highly encourage you to do so. We plan to return next year to hike the three-mile Rimrock Trail.



Lava Pillar

NEW PLANTS IN THE PHILATELIC HERBARIUM

Christopher E. Dahle, BU1269

Laelia purpurata ‘Miss Scarlet’ ORCHIDACEAE

Cultivar. Current genus allocation is *Cattleya*.

Epiphytic, with a single leaf. *Laelia purpurata* is probably the species with the widest color variation in the section, and basic color on segments varies from white to light pink-magenta. The variation includes stripes, veins and splashes on petals, but is most impressive on the lip, where veins can come in different tones of pink, purple, violet, blue-gray, brick red, etc. *Laelia purpurata* is native to Santa Catarina in southern Brazil.

Angola Sc#1532. Issued 10 December 2018 in Set/4 & SS/1.

Cymbidium ‘Sandy Tiger’ ORCHIDACEAE

Hybrid of *Cymbidium sanderae* × *C. tigrinum*.

C. sanderae was first collected in Vietnam. Flowers are 7.5 cm and fragrant, appearing winter to spring. Epiphytic found at 1400–1500 m altitude. *C. tigrinum* is a lithophyte. Flowers 4–5 cm are honey-scented. Originally from Burma, northeast India, and China at 1,500–2,700 m.

Angola Sc#1533. Issued 10 December 2018.

Laeliocattleya Trick or Treat ‘Sweety’ ORCHIDACEAE

Cultivar out of Trick or Treat.

Trick or Treat was a hybrid developed in 1973 by Stewart, Inc. from *Cattleya Icarus* (*C. cinnabarina* × *C. crispata*) × *Cattlianthe* Chit Chat [*Guarianthe aurantica* × *Cattleya Coronet* (*C. cinnabarina* × *C. harpophylla*)]. Large orange flowers 5–7 cm. Blooms in March.

Angola Sc#1534. Issued 10 December 2018.

Brassolaeliocattleya Momilani Rainbow ‘The Gypsy’ ORCHIDACEAE

Cultivar from the Momilani Rainbow hybrid.

Momilani Rainbow (*Brassolaeliocattleya* Orange Nugget × *Laeliocattleya* Mari’s Song). Blooms 2–3 times a year.

Angola Sc#1535. Issued 10 December 2018.



Laelia anceps ‘SanBar Bounty’ ORCHIDACEAE

Cultivar

A tremendous grower and bloomer with all the species charm that comes with this Mexican native. October–November blooming.

Angola Sc#1536 SS. Issued 10 December 2018

Coelogyne mayeriana ORCHIDACEAE

Epiphyte on tree trunks or occasionally terrestrial in humus, with 8–24 cm pseudobulbs. Blooms summer–fall with pendant 45 cm inflorescence bearing multiple lemon-scented 7 cm flowers. Found in Malaysia, Sumatra, Java, and Borneo at elevations of sea level to 100 m often near mangroves.

Indonesia Sc#2462a. Issued 18 May 2017, for the 200th Anniversary of Boogor Botanical Garden in Sheet/34.



***Coelogyne rochussenii* ORCHIDACEAE**

Synonyms: *C. macrobulbon*, *C. plantaginea*, *C. steffiensii*, *C. stellaris*, *Pleione macrobulbon*, *P. plantaginea*, *P. rochussenii*

Epiphyte, sometimes found on rocks, has two 5 cm long leaves from pseudobulbs. Blooms in winter on 45 cm inflorescence from mature pseudobulbs, with up to 40 lemon-scented, simultaneously opening, 6.25 cm flowers. Occurs in Malaysia, Borneo, Java, and Sumatra and east to the Philippines in lowlands often on trees overhanging rivers at elevations up to 1,500 m.

Indonesia Sc#2462d. Issued 18 May 2017 for the 200th Anniversary of Boogor Botanical Garden in a sheet of 34.

***Bulbophyllum medusae* ORCHIDACEAE**

Synonyms: *Cirrhopetalum medusae*, *C. medusae* var. *album*, *Phyllorchis medusae*, *Phyllorkis medusae*

Epiphyte with single apical leaf from pseudobulbs. Flowers fall-winter on a 20 cm tall erect inflorescence from a new pseudobulb. Flowers are malodorous and 15 cm long. Native to Thailand, Malaysia, Borneo, Lesser Sunda Islands, and Sumatra where it is found in lowland forests at elevations of sea level to 400 m on trunks and main branches of trees.

Indonesia Sc#2462i. Issued 18 May 2017.

***Thrixspermum centipeda* ORCHIDACEAE**

Common name: Centipede Thrixspermum

Synonyms: 16

Small epiphyte or lithophyte. Blooms in spring on 40 cm, pendant inflorescence with 2.5 cm fragrant flowers. Native to China, Hong Kong, the eastern Himalayas, Assam, Myanmar, Thailand, Laos, Cambodia, Vietnam, peninsular Malaysia, Borneo, Java, Sulawesi, Sumatra, and the Philippines in broadleaf, evergreen, semi-deciduous and deciduous, dry, lowland forests and savanna-like woodlands at elevations of 300 to 1,300 m.

Indonesia Sc#2462n. Issued 18 May 2017.

***Acanthephippium javanicum* ORCHIDACEAE**

Common name: Java Acanthephippium

Large terrestrial herb with pseudobulbs carrying 2–4 leaves. Blooms in spring on 20 cm 1–6 flowered inflorescence with fragrant 3.5 cm flowers. Occurs in Malaysia, Java, Borneo, and Sumatra in damp lowlands and hill forests at elevations of 300 to 1,500 m.

Indonesia Sc#2462v. Issued 18 May 2017.

***Paphiopedilum supardii* ORCHIDACEAE**

Common name: Supard's Paphiopedilum

Erect lithophytic herb growing on limestone rocks in leaf-mold filled hollows in half shade. Blooms from April to June on 30–40 cm, 3–7 flowered inflorescence with 10 cm flowers. Critically endangered on IUCN Red List. Known from one mountain range in southeast Borneo at 600–960 m.

Indonesia Sc#2462v. Issued 18 May 2017.

***Paraphalaenopsis labukensis* ORCHIDACEAE**

Synonym: *Phalaenopsis labukensis*

Very large pendent-growing epiphyte with 3–5 fleshy leaves. Spring blooms on short (8 cm), 5–15 flowered inflorescence with 6.2 cm flowers. Found in Borneo where it grows on trees in hill forests on ultramafic rocks at 500–1,000 m.

Indonesia Sc#2462x. Issued 18 May 2017.



Aerides huttonii ORCHIDACEAESynonyms: *Aerides reversa*, *Saccolabium huttonii*

Medium sized epiphyte with pendulous stem bearing several leaves. Fall-blooming, with 35 cm densely flowered inflorescence carrying waxy simultaneously opening 2.5–3 cm flowers. Found in northeastern Sulawesi in lowland forests at elevations of sea level to 800 m.

Indonesia Sc#2462y. Issued 18 May 2017.

***Paphiopedilum glanduliferum*** ORCHIDACEAE

Synonyms: 11

Terrestrial herb with 4–6 somewhat fleshy glabrous leaves to 40 by 3–5.5 cm. Flowers in February–June, with multiple blooms on a 30 to 50 cm inflorescence with 12–16 cm flowers. Not seen since described in 1848. Occurs in New Guinea from sea level to 1,700 m on limestone cliffs.

Indonesia Sc#2462ag. Issued 18 May 2017.

***Coelogyne marthae*** ORCHIDACEAE

Medium-sized epiphyte with pseudobulbs having 2 leaves. Flowers in spring with 10–25 cm, 3–5 flowered inflorescence carrying 7 cm blossoms. Occurs in Sarawak Borneo on lower tree trunks in flooded heath forests at elevations of 50 to 300 m. Endemic, discovered by Bogor Botanical Gardens researchers in Katingan, Central Kalimantan, in 2013.

Indonesia Sc#2463. Issued 18 May 2017 for 200th Anniversary of Bogor Botanical Garden as a souvenir sheet. Print run: 30,000 by PT Post Indonesia.

Echinocereus dasyacanthus CACTACEAE

Common name: Texas Rainbow Cactus

Synonyms: *E. dasyacanthus* var. *ctenoides*, *E. dasyacanthus* ssp. *dasyacanthus*, *E. dasyacanthus* var. *rectispinus*, *E. dasyacanthus* ssp. *rectispinus*, *E. dasyacanthus* var. *rigidissimus*

Perennial succulent plant to 15 cm with initial oval growth habit becoming cylindrical to 10 cm diameter. Yellow flowers to 10 cm long with pink or orange tints appear March to August. Berry type fruits are green. Grows in scrubland, grassy plains, canyon sides, and limestone terraces up to 1,500 m in extreme southeast Arizona, southern New Mexico, and far west Texas and Sonora, Chihuahua, and Coahuila, in Mexico.

United States Sc#5352. Issued 15 February 2019. Designed by Ethel Kessler from photographs by John P. Schaefer of Tucson, Arizona. Printed by Banknote Corporation of America, Browns Summit, North Carolina. Printed on phosphor-tagged paper with block tagging, using double-sided panes with self-adhesive gum, in booklet format of 20 stamps in 10 designs.



Echinocereus poselgeri CACTACEAE

Common name: Dahlia Cactus, Pencil Cactus, Dahlia Hedgehog Cactus

Synonyms: *E. poselgeri* ssp. *gerhardii*, *E. poselgeri* ssp. *kroenleinii*

Perennial, shrubby succulent, initially erect. Stem to 1.2 m, 2 cm diameter. Pink or red flowers 4 cm long in March to July, close at night. Grows in xerophilous scrub in alluvial soils. Prefers to clamber through woody vegetation for support. Occurs in sandy soils of valleys and hills in semi-desert brush lands of Texas and Coahuila, Nuevo Leon, and Tamaulipas in Mexico, at elevations up to 1,150 m.

United States Sc#5353. Issued 15 February 2019.

***Pelecyphora aselliformis*** CACTACEAE

Common name: False Peyote, Peyotillo

Perennial succulent. Small, slow growing, clustering cactus with unique, spherical to shortly cylindrical stem, to 10 cm tall and 5 cm in diameter. Flowers are pink to violet up to 3.5 cm diameter. Found in semi-desert among calcareous rocks in Subtropical/Tropical dry shrub land. Endemic to Mexican state of San Luis Potosí, where it occurs in the north and northwest at elevations of 1,800–2,400 m.

United States Sc#5355. Issued 15 February 2019.

***Parodia microsperma*** CACTACEAE

Synonyms: 12

Succulent shrub, globose or cylindrical to 9 cm diameter, 10 cm tall. Flowers 30 mm long, 40 mm diameter are yellowish-orange with a vermillion midline and bright red throat. Ovoid fruit are 6×5 mm. Occurs in three sub-populations, two in Argentina and one in Bolivia at 500–2,000 m.

United States Sc#5356. Issued 15 February 2019.

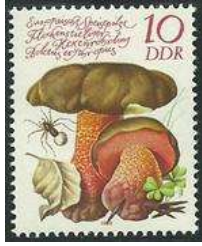
***Thelocactus heterochromus*** CACTACEAE

Synonyms: *Thelocactus pottsii*

Robust-globular somewhat squat cactus with large round tubercles. Stems are 15 cm diameter and 10–15 cm tall. Blooms March to October. Pink flowers with red throat 8–10 cm diameter. Grows on limestone hills in xerophilic woodland in Durango and Coahuila in northeast Mexico.

United States Sc#5358. Issues 15 February 2019.



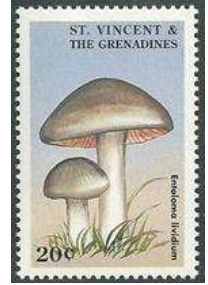


FUNGI

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.]

JAPAN

2018 August 23 (Definitives) (2ea MS/10)

Scott#	Denom	Common Name/Scientific Name	Family	Code
4225e	62¥	U/I boletes (circular)	Boletaceae	U A
4226a	82¥	U/I boletes (w/ chipmunk)	Boletaceae	U B
4226d	82¥	U/I Mushrooms (w/ fallen leaves)		U A

LIBERIA

2018 May 22 (Mushrooms) (MS/6)

Scott#	Denom	Common Name/Scientific Name	Family	Code
3267a	\$100	Penny Buns, <i>Boletus edulis</i>	Boletaceae	A
3267b	\$100	Crab Brittle-gills, <i>Russula xerampelina</i>	Russulaceae	A
3267c	\$200	Chanterelles, <i>Cantharellus cibarius</i>	Cantharellaceae	A
3267d	\$200	Field Mushrooms, <i>Agaricus campestris</i>	Agaricaceae	A
3267e	\$300	Honey Mushrooms, <i>Armillaria mellea</i>	Physalacriaceae	A
3267f	\$300	Sponge Morels, <i>Morchella esculenta</i>	Morchellaceae	A

MALAWI

2018 August (Mushrooms) (MS/6 & 6ea SS/1)

The Scott Catalogue does not specify which number applies to each subject in the MS/6. I speculate in the list below as my best guess based on the traditional numbering scheme. Each species on the SS also appears in the margin.

Scott#	Denom	Common Name/Scientific Name	Family	Code
863a	700k	? <i>Agaricus</i> sp.	Agaricaceae	U A
863b	700k	U/I Bolete	Boletaceae	U A
863c	700k	? <i>Pleurotus</i> sp.	Pleurotaceae	U A
863d	700k	? <i>Russula</i> sp.	Russulaceae	U A
863e	700k	? <i>Pleurotus</i> sp.	Pleurotaceae	U A
863f	700k	? <i>Stropharia</i> sp.	Strophariaceae	U A
863	Margin	Bkgrd: U/I Mushrooms		U Z
864	SS 450k	Branched Oyster, <i>Pleurotus cornucopiae</i>	Pleurotaceae	A
865	SS 450k	Portabella, <i>Agaricus bisporus</i>	Agaricaceae	A
866	SS 450k	U/I Mushroom (Cap: <i>Psathyrella</i> Cap) (does not appear to be a <i>Psathyrella</i> species)		U A
867	SS 450k	Pearl Oyster, <i>Pleurotus ostreatus</i>	Pleurotaceae	A
868	SS 450k	Coccora or Coccoli, <i>Amanita calyptroderma</i>	Amanitaceae	A
869	SS 450k	U/I Chanterelles	Cantharellaceae	U A

NETHERLANDS

2018 September 17 (Mushrooms) (MS/10)

Scott#	Denom	Common Name/Scientific Name	Family	Code
1575a	(83c)	Sparrenveertje, <i>Pterula multifida</i>	Pleurotaceae	A
1575b	(83c)	Fly Agaric, <i>Amanita muscaria</i> (☠)	Amanitaceae	A
1575c	(83c)	Twig Parachute, <i>Marasmius ramealis</i>	Marasmiaceae	A
1575d	(83c)	Fragile Brittle-gill, <i>Russula fragilis</i>	Russulaceae	A
1575e	(83c)	Bonnet Mold, <i>Spinellus fusiger</i>	Phycomycetaceae	A
1575f	(83c)	Moor Club, <i>Clavaria argillacea</i>	Clavariaceae	A
1575g	(83c)	Plooi-vlieswaaiertje, <i>Plicaturopsis crispa</i>	Amylocorticiaceae	A
1575h	(83c)	Verdigris Agaric, <i>Psilocybe aeruginosa</i>	Strophariaceae	A

NETHERLANDS (continued)

1575i	(83c)	Bleeding Fairy Helmet, <i>Mycena haematopus</i>	Mycenaceae	A
1575j	(83c)	Cauliflower Fungus, <i>Sparassis crispa</i>	Sparassidaceae	A

Look-alikes**JAPAN****2018 June 1** (Odd Shape Definitives) (MS/10)

4209a	82¥	Base of fan looks like a <i>Marasmius</i> or <i>Mycena</i> mushroom		X
4209b	82¥	Base of fan looks like a <i>Marasmius</i> or <i>Mycena</i> mushroom		X

SERBIA MUSHROOMS

On 7 March 2019, Serbia issued a block of four stamps depicting different species of mushrooms found in Serbia. The colorful stamps were printed in sheets of 16 with only 25,000 produced.

The first stamp shows *Psilocybe serbica*. The mushroom contains the compound psilocybin, a naturally occurring psychedelic prodrug. Psilocybin is quickly converted by the body to psilocin, which has mind-altering effects similar in some aspects to those of LSD and mescaline. Imagery found on prehistoric murals and rock paintings of modern-day Spain and Algeria suggests that human usage of psilocybin mushrooms predates recorded history.

The second stamp shows *Tuber petrophilum*. This is a newly described species of black truffle, which is the fruiting body of a subterranean fungus highly prized as food in haute cuisine. Truffles are usually found in close association with tree roots, in this case oak trees.

The third stamp shows the Magpie Inkcap, *Coprinopsis picacea*. This poisonous mushroom often appears as a solitary growth, but the stamp shows a grouping of three. It is found throughout Europe, most commonly in areas with alkaline soil. It also appears in parts of North America.

The fourth stamp shows *Octospora pannosa*. This is another newly described species that has been found in two localities in Germany and Serbia. It grows on the pleurocarpous moss *Brachytheciastrum velutinum*, and this is the first reported instance of this moss hosting a species of *Octospora*.





MAMMALIA

Editor

Michael Prince, LM68



New Listings

Scott#	Denom	Common Name/Scientific Name	Family/Subfamily	Code
ANDORRA (French) 2018 September 28 (Otter) (Single)				
796	95c	European Otter, <i>Lutra lutra</i>	Mustelidae	A
ANGOLA 2018 December 10 (Rhinoceroses) (Set/4 & SS/1)				
1420	300k	Black Rhinoceros, <i>Diceros bicornis</i> (w/ calf)	Rhinocerotidae	A
1421	300k	Black Rhinoceros, <i>Diceros bicornis</i> (facing R)	Rhinocerotidae	A
1422	300k	White Rhinoceros, <i>Ceratotherium simum</i> (one adult)	Rhinocerotidae	A
1423	300k	White Rhinoceros, <i>Ceratotherium simum</i> (two adults)	Rhinocerotidae	A
1540	SS 1200k	White Rhinoceros, <i>Ceratotherium simum</i>	Rhinocerotidae	A
	Margin	LL & R: Same species	Rhinocerotidae	Z
2018 December 10 (Giraffes) (Set/4 & SS/1)				
1424	300k	Giraffe, <i>Giraffa camelopardalis</i> ssp. <i>angolensis</i> (head)	Giraffidae	A
1425	300k	Giraffe, <i>Giraffa camelopardalis</i> ssp. <i>angolensis</i> (drinking)	Giraffidae	A
1426	300k	Giraffe, <i>Giraffa camelopardalis</i> ssp. <i>angolensis</i> (facing R)	Giraffidae	A
1427	300k	Giraffe, <i>Giraffa camelopardalis</i> ssp. <i>angolensis</i> (six animals)	Giraffidae	A
1541	SS 1200k	Giraffe, <i>Giraffa camelopardalis</i> ssp. <i>angolensis</i>	Giraffidae	A
	Margin	LL & R: Same species	Giraffidae	Z
2018 December 10 (Primates) (Set/4 & SS/1)				
1428	300k	Demidoff's Galago, <i>Galagoides demidoff</i>	Galagidae	A
1429	300k	Allen's Swamp Monkey, <i>Allenopithecus nigroviridis</i>	Cercopithecidae	A
1430	300k	Grey-cheeked Mangabey, <i>Lophocebus albigena</i>	Cercopithecidae	A
1431	300k	Angolan Colobus, <i>Colobus angolensis</i>	Cercopithecidae	A
1542	SS 1200k	Red-tailed Monkey, <i>Cercopithecus ascanius</i>	Cercopithecidae	A
	Margin	R: Western Gorilla, <i>Gorilla gorilla</i>	Hominidae	Z
		ML: Angolan Colobus, <i>Colobus angolensis</i>	Cercopithecidae	Z
		LL: Allen's Swamp Monkey, <i>Allenopithecus nigroviridis</i>	Cercopithecidae	Z
2018 December 10 (Bats) (Set/4 & SS/1)				
1432	300k	Hammer-headed Fruit Bat, <i>Hypsignathus monstrosus</i>	Pteropodidae	A
1433	300k	Angolan Free-tailed Bat, <i>Mops condylurus</i>	Molossidae	A
1434	300k	Franquet's Epauletted Bat, <i>Epomops franqueti</i>	Pteropodidae	A
1435	300k	Peters's Epauletted Fruit Bat, <i>Epomophorus crypturus</i>	Pteropodidae	A
1543	SS 1200k	Angolan Hairy Bat, <i>Cistugo seabrae</i>	Vespertilionidae	(new) A
	Margin	UR & LL: Franquet's Epauletted Bat, <i>Epomops franqueti</i>	Pteropodidae	Z
		LR: Hammer-headed Fruit Bat, <i>Hypsignathus monstrosus</i>	Pteropodidae	Z
		ML: Angolan Free-tailed Bat, <i>Mops condylurus</i>	Molossidae	Z
2018 December 10 (Big Cats) (Set/4 & SS/1)				
1436	300k	Cheetah, <i>Acinonyx jubatus</i>	Felidae	A
1437	300k	Leopard, <i>Panthera pardus</i> ssp. <i>pardus</i>	Felidae	A
1438	300k	Caracal, <i>Caracal caracal</i>	Felidae	A
1439	300k	Lion, <i>Panthera leo</i> ssp. <i>bleyenberghi</i>	Felidae	A

ANGOLA (continued)

1544	SS 1200k	Serval, <i>Leptailurus serval</i>	Felidae	A
	Margin	R: Cheetah, <i>Acinonyx jubatus</i>	Felidae	Z
		ML: Lion, <i>Panthera leo</i>	Felidae	Z
		LL: Leopard, <i>Panthera pardus</i>	Felidae	Z

2018 December 10 (Elephants) (Set/4 & SS/1)

1440	300k	African Bush Elephant, <i>Loxodonta africana</i> (walking L)	Elephantidae	A
1441	300k	African Bush Elephant, <i>Loxodonta africana</i> (facing R)	Elephantidae	A
1442	300k	African Bush Elephant, <i>Loxodonta africana</i> (two facing L & R)	Elephantidae	A
1443	300k	African Bush Elephant, <i>Loxodonta africana</i> (two facing R)	Elephantidae	A
1545	SS 1200k	African Bush Elephant, <i>Loxodonta africana</i>	Elephantidae	A
	Margin	L & R: Same species	Elephantidae	Z

2018 December 10 (Dolphins) (Set/4 & SS/1)

1444	300k	Pantropical Spotted Dolphin, <i>Stenella attenuata</i>	Delphinidae	A
1445	300k	Spinner Dolphin, <i>Stenella longirostris</i>	Delphinidae	A
1446	300k	Atlantic Spotted Dolphin, <i>Stenella frontalis</i>	Delphinidae	A
1447	300k	Fraser's Dolphin, <i>Lagenodelphis hosei</i>	Delphinidae	A
1546	SS 1200k	Rough-toothed Dolphin, <i>Steno bredanensis</i>	Delphinidae	A
	Margin	R: Common Bottlenose Dolphin, <i>Tursiops truncatus</i>	Delphinidae	Z
		LL: Pantropical Spotted Dolphin, <i>Stenella attenuata</i>	Delphinidae	Z
		ML: Atlantic Spotted Dolphin, <i>Stenella frontalis</i>	Delphinidae	Z

2018 December 10 (Whales) (Set/4 & SS/1)

1448	300k	Short-finned Pilot Whale, <i>Globicephala macrorhynchus</i>	Delphinidae	A
1449	300k	Humpback Whale, <i>Megaptera novaeangliae</i>	Balaenopteridae	A
1450	300k	Southern Right Whale, <i>Eubalaena australis</i>	Balaenidae	A
1451	300k	Pygmy Sperm whale, <i>Kogia breviceps</i>	Physeteridae	A
1547	SS 1200k	Humpback Whale, <i>Megaptera novaeangliae</i> (incorrectly Cap: <i>Balaenoptera musculus</i>)	Balaenopteridae	A
	Margin	R & ML: Humpback Whale, <i>Megaptera novaeangliae</i>	Balaenopteridae	Z
		LL: Pygmy Sperm Whale, <i>Kogia breviceps</i>	Physeteridae	Z

ANTIGUA**2018 May 8** (Marine Mammals) (MS/6)

3400a	\$2	Orca (Killer Whale), <i>Orcinus orca</i>	Delphinidae	A
3400b	\$3	Humpback Whale, <i>Megaptera novaeangliae</i>	Balaenopteridae	A
3400c	\$4	Sperm Whale, <i>Physeter macrocephalus</i>	Physeteridae	A
3400d	\$5	False Killer Whale, <i>Pseudorca crassidens</i>	Delphinidae	A
3400e	\$6	Spinner Dolphin, <i>Stenella longirostris</i>	Delphinidae	A
3400f	\$7	Common Bottlenose Dolphin, <i>Tursiops truncatus</i>	Delphinidae	A

BOTSWANA**2018 August 30** (Animals) (Set/15 & SS/5)

1048	20t	Bat-eared Fox, <i>Otocyon megalotis</i>	Canidae	A
1055	(5p)	Springbok, <i>Antidorcas marsupialis</i> (inscr. "STD A")	Bovidae	A
1056	(7p)	Small-spotted Genet, <i>Genetta genetta</i> (inscr. "STD B")	Viverridae	A
1057	(8p)	Puku, <i>Kobus vardonii</i> (inscr. "Postcard Rate")	Bovidae	A
1058	9p	Blue Wildebeest, <i>Connochaetes taurinus</i>	Bovidae	A
1058a		SS/5 (Sc#1048, Sc#1055–58)		

BRITISH ANTARCTIC TERR.**2018 November 1** (Migratory Seals) (2ea Vert Pair)

571a	66p	Antarctic Fur Seal, <i>Arctocephalus gazella</i>	Otariidae	A
571b	76p	Antarctic Fur Seal, <i>Arctocephalus gazella</i>	Otariidae	A
572a	£1.22	Leopard Seal, <i>Hydrurga leptonyx</i>	Phocidae	A
572b	£1.50	Leopard Seal, <i>Hydrurga leptonyx</i>	Phocidae	A

COSTA RICA		2018 September 13 (200th anniv. Independence) (MS/6+3 labels)		
701b	630col	West Indian Manatee, <i>Trichechus manatus</i>	Trichechidae	A
701c	685col	White-tailed Deer, <i>Odocoileus virginianus</i>	Cervidae	A
701		MS/6 (2ea Sc#701a-c + 3 labels)		
ESTONIA		2018 October 12 (Jackal) (Single)		
878	65c	Golden Jackal, <i>Canis aureus</i>	Canidae	A
FRENCH SOUTH. & ANTARCTIC TERR.		2018 October 17 (50th death anniv. Albert Faure) (SS/1)		
598	Margin	LL: Southern Elephant Seal, <i>Mirounga leonina</i>	Phocidae	Z
GRENADA		2018 August 3 (Flora & Fauna) (Set/6)		
4288	\$10	West Indian Manatee, <i>Trichechus manatus</i>	Trichechidae	A
4289	\$20	Nine-banded Armadillo, <i>Dasypus novemcinctus</i>	Dasypodidae	A
GRENADA GRENADINES		2018 March 7 (Mammals) (MS/5 & SS/1)		
3001a	\$3	Central American Agouti, <i>Dasyprocta punctata</i>	Dasyproctidae	A
3001b	\$4	Small Asian Mongoose, <i>Herpestes javanicus</i>	Herpestidae	A
3001c	\$5	Wild Boar, <i>Sus scrofa</i>	Suidae	A
3001d	\$6	Northern Black-eared Opossum, <i>Didelphis marsupialis</i>	Didelphidae	A
3001e	\$7	Geoffroy's Tailless Bat, <i>Anoura geoffroyi</i>	Phyllostomidae	A
3002	SS \$14	Mona Monkey, <i>Cercopithecus mona</i>	Cercopithecidae	A
GUYANA		2018 November 20 (South American Tapirs) (MS/4 & SS/2)		
4589a	\$300	South American Tapir, <i>Tapirus terrestris</i> (head facing R)	Tapiridae	A
4589b	\$300	Same species (facing L)	Tapiridae	A
4589c	\$300	Same species (striped head facing R)	Tapiridae	A
4589d	\$300	Same species (facing front)	Tapiridae	A
4590a	SS \$500	South American Tapir, <i>Tapirus terrestris</i>	Tapiridae	A
4590b	SS \$550	South American Tapir, <i>Tapirus terrestris</i>	Tapiridae	A
INDONESIA		2017 June 1 (Lions Club International Centenary) (Horiz Pair)		
2464a	5000r	Lion, <i>Panthera leo</i> ♂ & ♀	Felidae	A
2464b	5000r	Lion, <i>Panthera leo</i> ♂	Felidae	A
KAZAKHSTAN		2018 September 17 (Bears) (SS/2)		
863a	SS 500te	Brown Bear, <i>Ursus arctos</i> ssp. <i>isabellinus</i>	Ursidae	A
863b	SS 600te	Brown Bear, <i>Ursus arctos</i> ssp. <i>isabellinus</i>	Ursidae	A
KAZAKHSTAN		2018 October 19 (Almaty State Nature Reserve Animals) (SS/3)		
874a	SS 500te	Siberian Ibex, <i>Capra sibirica</i>	Bovidae	A
874c	SS 500te	Stoat (Ermine), <i>Mustela erminea</i>	Mustelidae	A
KYRGYZ EXPRESS POST		2018 December 7 (Endangered Species) (Set/4 & SS/4)		
99	50s	Marbled Polecat, <i>Vormela peregusna</i>	Mustelidae	A
100	75s	Pallas's Cat, <i>Otocolobus manul</i>	Felidae	A
101	100s	Eurasian Lynx, <i>Lynx lynx</i> ssp. <i>isabellinus</i>	Felidae	A
102	150s	Brown Bear, <i>Ursus arctos</i> ssp. <i>isabellinus</i>	Ursidae	A
102a		(SS/4 (Sc#99-102))		
LIBERIA		2017 March 14 (Wildlife) (Set/3)		
3189	\$6000	Red River Hog <i>Potamochoerus porcus</i>	Suidae	A
3190	\$10000	Leopard, <i>Panthera pardus</i>	Felidae	A
		2017 April 14 (Animals of the World) (MS/4 & SS/1)		
3196c	\$180	African Wild Dog, <i>Lycaon pictus</i>	Canidae	A
3197	SS \$360	Matschie's Tree Kangaroo, <i>Dendrolagus matschiei</i>	Macropodidae	A

LIBERIA (continued)		2017 July 24 (Fennec Foxes) (MS/4 & SS/2)		
3219a	\$180	Fennec Fox, <i>Vulpes zerda</i> (facing front)	Canidae	A
3219b	\$180	Same species (head facing R)	Canidae	A
3219c	\$180	Same species (sleeping)	Canidae	A
3219d	\$180	Same species (standing on rock)	Canidae	A
	Margin	Ctr: Same species	Canidae	Z
3220a	SS \$250	Fennec Fox, <i>Vulpes zerda</i> (sitting)	Canidae	A
3220b	SS \$250	Same species (standing)	Canidae	A
	Margin	Bot: Same species	Canidae	Z
		2017 July 24 (Diana Monkeys) (MS/3 & SS/2)		
3221a	\$200	Diana Monkey, <i>Cercopithecus diana</i> (holding food)	Cercopithecidae	A
3221b	\$200	Same species (looking up)	Cercopithecidae	A
3221c	\$200	Same species (facing R)	Cercopithecidae	A
3222a	SS \$200	Diana Monkey, <i>Cercopithecus diana</i> (facing L)	Cercopithecidae	A
3222b	SS \$200	Same species (facing front)	Cercopithecidae	A
		2017 July 24 (Elephants) (MS/4 & SS/3)		
3223a	\$180	African Bush Elephant, <i>Loxodonta africana</i> (adults & juvenile)	Elephantidae	A
3223b	\$180	Same species (in jungle)	Elephantidae	A
3223c	\$180	Same species (four animals)	Elephantidae	A
3223d	\$180	Same species (in grassland)	Elephantidae	A
	Margin	LL: Same species	Elephantidae	Z
3224a	SS \$180	African Bush Elephant, <i>Loxodonta africana</i> (facing L)	Elephantidae	A
3224b	SS \$180	Same species (facing R)	Elephantidae	A
3224c	SS \$180	Same species (facing front)	Elephantidae	A
	Margin	Bot: Same species	Elephantidae	Z
		2018 January 24 (Hyenas) (MS/6 & SS/3)		
3239a	\$90	Spotted Hyena, <i>Crocuta crocuta</i>	Hyaenidae	A
3239b	\$90	Brown Hyena, <i>Hyaena brunnea</i>	Hyaenidae	A
3239c	\$100	Striped Hyena, <i>Hyaena hyaena</i>	Hyaenidae	A
3239d	\$100	Spotted Hyena, <i>Crocuta crocuta</i>	Hyaenidae	A
3239e	\$150	Spotted Hyena, <i>Crocuta crocuta</i>	Hyaenidae	A
3239f	\$150	Aardwolf, <i>Proteles cristatus</i>	Hyaenidae	A
	Margin	Ctr: Spotted Hyena, <i>Crocuta crocuta</i>	Hyaenidae	Z
3240a	SS \$175	Spotted Hyena, <i>Crocuta crocuta</i>	Hyaenidae	A
3240b	SS \$185	Same species	Hyaenidae	A
3240c	SS \$195	Same species	Hyaenidae	A
	Margin	R: Same species	Hyaenidae	Z
		2018 February 8 (Monkeys) (MS/4 & SS/2)		
3244a	\$180	Collared Mangabey, <i>Cercocebus torquatus</i>	Cercopithecidae	A
3244b	\$180	Mona Monkey, <i>Cercopithecus mona</i>	Cercopithecidae	A
3244c	\$180	Green Monkey, <i>Chlorocebus sabaeus</i>	Cercopithecidae	A
3244d	\$180	Patas Monkey, <i>Erythrocebus patas</i>	Cercopithecidae	A
3245a	SS \$250	Diana Monkey, <i>Cercopithecus diana</i>	Cercopithecidae	A
3245b	SS \$250	Sooty Mangabey, <i>Cercocebus atys</i>	Cercopithecidae	A
LIBERIA		2018 May 22 (Big Cats) (MS/6)		
3266a	\$100	Lion <i>Panthera leo</i>	Felidae	A
3266b	\$100	Snow Leopard, <i>Panthera uncia</i>	Felidae	A
3266c	\$200	Cheetah, <i>Acinonyx jubatus</i>	Felidae	A

LIBERIA (continued)

3266d	\$200	Leopard, <i>Panthera pardus</i>	Felidae	A
3266e	\$300	Leopard, <i>Panthera pardus</i>	Felidae	A
3266f	\$300	Tiger, <i>Panthera tigris</i>	Felidae	A

2018 May 22 (Duikers) (MS/4 & SS/1)

3268a	\$200	Common Duiker, <i>Sylvicapra grimmia</i>	Bovidae	A
3268b	\$250	Red Forest Duiker, <i>Cephalophus natalensis</i>	Bovidae	A
3268c	\$300	Red Forest Duiker, <i>Cephalophus natalensis</i>	Bovidae	A
3268d	\$350	Common Duiker, <i>Sylvicapra grimmia</i>	Bovidae	A
3269	SS \$500	Common Duiker, <i>Sylvicapra grimmia</i>	Bovidae	A

2018 September 14 (Wild Cats) (MS/4 & SS/1)

3287a	\$250	African Wild Cat, <i>Felis silvestris</i> ssp. <i>lybica</i>	Felidae	A
3287b	\$250	Black-footed Cat, <i>Felis nigripes</i>	Felidae	A
3287c	\$250	Jungle Cat, <i>Felis chaus</i>	Felidae	A
3287d	\$250	Caracal, <i>Caracal caracal</i>	Felidae	A
3288	SS \$500	Sand Cat, <i>Felis margarita</i>	Felidae	A

2018 October 25 (Donkeys & Zebras) (SS/3)

3292a	SS \$200	Donkey, <i>Equus africanus</i> ssp. <i>asinus</i>	Equidae	A
3292b	SS \$250	Zedonk, <i>Equus</i> "zebra" × <i>Equus</i> "equine" (hybrid)	Equidae	A
3292c	SS \$300	Plains Zebra, <i>Equus quagga</i>	Equidae	A

2018 October 25 (Great Zebra Migration) (MS/4 & SS/1)

3293a	\$150	Burchell's Zebra, <i>Equus quagga</i> ssp. <i>burchellii</i>	Equidae	A
		Blue Wildebeest, <i>Connochaetes taurinus</i>	Bovidae	C
3293b	\$250	Burchell's Zebra, <i>Equus quagga</i> ssp. <i>burchellii</i>	Equidae	A
		Blue Wildebeest, <i>Connochaetes taurinus</i>	Bovidae	B
3293c	\$350	Burchell's Zebra, <i>Equus quagga</i> ssp. <i>burchellii</i>	Equidae	A
		Blue Wildebeest, <i>Connochaetes taurinus</i>	Bovidae	C
3293d	\$450	Burchell's Zebra, <i>Equus quagga</i> ssp. <i>burchelli</i>	Equidae	A
3293	Margin	UR: Giraffe, <i>Giraffa camelopardalis</i>	Giraffidae	Z
		Bot: Blue Wildebeest, <i>Connochaetes taurinus</i>	Bovidae	Z
3294	SS \$600	Burchell's Zebra, <i>Equus quagga</i> ssp. <i>burchelli</i>	Equidae	A
	Margin	Bot: Same species	Equidae	Z
		LL & LR: African Bush Elephant, <i>Loxodonta africana</i>	Elephantidae	Z

NORWAY**2017 March 29** (Wildlife Type of 2006) (Single)

1825	11.50k	Western Roe Deer, <i>Capreolus capreolus</i>	Cervidae	A
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SLOVENIA**2018 September 28** (Endangered Animals) (Set/5)

1285	(34c)	Eurasian Lynx, <i>Lynx lynx</i> (inscr. "A")	Felidae	A
1286	(52c)	Mountain Hare, <i>Lepus timidus</i> (inscr. "B")	Leporidae	A
1287	€1.	Least Weasel, <i>Mustela nivalis</i>	Mustelidae	A
1288	(€1.17)	Southern Water Shrew, <i>Neomys anomalus</i> (inscr. "C")	Soricidae	(new) A
1289	(€1.31)	European Otter, <i>Lutra lutra</i> (inscr. "D")	Mustelidae	A

UZBEKISTAN**2018 August 6** (Zomin Nature Reserve Flora & Fauna) (MS/8)

861b	1000s	Wild Boar, <i>Sus scrofa</i>	Suidae	A
861d	2700s	Red Fox, <i>Vulpes vulpes</i>	Canidae	A

BRITISH BIRDS OF PREY

On 4 April 2019, the British Royal Mail issued a set of ten First Class stamps depicting photographs of various birds of prey native to the United Kingdom. Each bird was individually photographed by well-known and leading British animal photographer, Tim Flach, at the International Centre for Birds of Prey.



Included in the set are: White-tailed Eagle, Buzzard, Sparrowhawk, Merlin, Golden Eagle, Kestrel, Goshawk, Hobby, Red Kite, and Peregrine Falcon. Birds of prey are also known as “raptors.”

The stamps and a range of collectible products are available on general sale from www.royalmail.com/birdsofprey.

British photographer, Tim Flach, who specializes in animal photography, has captured the exquisite beauty of the birds in a mix of close-up shots and the majestic sight of them in flight. He said of working with Royal Mail, “It’s always very special to be invited to work on a set of stamps.

“I think it’s great that Royal Mail has chosen to put a focus on the birds of prey that we have in the UK. I’m really mindful of the fact that we’ve never been more separated from nature. And, the stamps really let us better understand what these animals are. It’s never been more important for us to think about the natural world.”

Royal Mail also worked with Jemima Parry-Jones MBE, Director of the International Centre for Birds of Prey, conservationist, established author, and leading British authority on birds of prey.

She said of the stamps, “Look at the stamps, enjoy the stamps, see if you can recognize those birds that you might see in your garden—like a Sparrowhawk or a Kestrel or a Buzzard sitting on a telegraph pole. See if you can recognize them from the stamps—that would be a huge step forward.”

Philip Parker, Royal Mail, said, “Our birds of prey are masters of the skies. Tim Flach’s photography for our stamps captures their beauty and character in extraordinary detail.”

The defining characteristic of birds of prey is that they are carnivores. Various birds eat meat, but only raptors catch and carry their food with their feet and have such exceptionally good binocular vision.

The diurnal birds of prey present in the UK are divided into several groups: eagles, true hawks, falcons, buzzards, kites, harriers, and the osprey.

The eagles are the Golden Eagle, a member of the booted eagle family, and the White-tailed Eagle, a member of the fish or sea-eagle family. Both are very large birds of prey, with the latter being the bigger of the two. In the UK, both are found in the more remote areas of Scotland and Northern Ireland.

There are two true hawks of the genus *Accipiter*: the Goshawk and the Sparrowhawk. These are forest species, with a short and very agile sprinting flight to catch their prey. Both have long tails and short rounded wings. Their yellow eyes turn orange and with age may even end up red.

The best-known falcon is the Peregrine. The others are the Kestrel (also known as the Windhover), the Merlin (the smallest British bird of prey), and the Hobby, present in the UK only in the summer, to breed.

The largest bird in the kite family, the Red Kite, is the only kite present in the UK and can now be seen in many places thanks to reintroductions and releases.

WHITE-TAILED EAGLE (*Haliaeetus albicilla*)

This very large eagle catches fish or sea birds with a low, slow approach, dropping its feet into the water to snatch the prey and then taking it to shore. These eagles were persecuted to extinction by 1918, but in 1975, a release program was started on Rùm in Scotland. The population in Scotland is now around 60 breeding pairs, with more than 200 adult birds.

BUZZARD (*Buteo buteo*)

By the 1970s, the Common (or Eurasian) Buzzard was rare in the UK other than in the far west. Since then, however, there has been a huge increase thanks to more nesting areas and to rabbits surviving myxomatosis, and buzzards are now breeding in every county. Buzzards are usually seen on fine days soaring and calling, with a mewling cry, or sitting on poles, on fences by roads, or on the ground, particularly when ploughed in the winter. They scavenge roadkill, which can cause them traffic injuries, or feed on insects on the ground. There is enormous color variation in this species, from almost all cream to very dark brown.

MERLIN (*Falco columbarius*)

The Merlin, which belongs to the falcon family, is the smallest UK raptor and can be found during the spring and summer on the uplands, nesting on the ground underneath heather. A specialist bird-catcher, it feeds its young on larks and meadow pipits in the summer. Females are brown, as are juveniles, while adult males have a blue-grey back. After the autumn arrives, these birds move to lowlands, in a partial migration, for the winter. Since Merlins are fast, agile, and small, they are not commonly seen, but energetic young make a spectacular ringing flight after larks.

GOSHAWK (*Accipiter gentilis*)

This aggressive, forest-dwelling hunter was probably extinct as a breeder until the middle of the 20th century. Its wing shape allows it to twist and turn through trees, and its long legs and powerful feet are well suited to hunting birds and mammals up to the size of a hare, with a short, often surprise attack. Adults are grey and white, with fine horizontal bars on the breast, while juveniles are brown, with vertical brown stripes. Goshawks build large stick nests and lay up to four eggs. The parents are vocal in the spring, when they can sometimes be seen soaring high in good weather.

SPARROWHAWK (*Accipiter nisus*)

This little hawk is most commonly seen in gardens catching small birds. Its defining features are very long, thin legs and yellow eyes. Males are tiny in comparison to females. Both hunt birds, but females can take birds up to the size of a pigeon. The Sparrowhawk is often blamed, wrongly, for the demise of small birds, while in fact it is cats, cars, windows, and pesticides that are responsible. Sparrowhawks build a stick nest and rear up to five young. The young grow swiftly and become independent by the age of 14 weeks, although only about a third survive their first year.

HOBBY (*Falco subbuteo*)

Larger than the merlin, this little falcon migrates to the UK from Africa in the spring to breed. With its long, sickle-shaped wings, it resembles a giant swift and is incredibly nimble in flight. Feeding on dragonflies and other insects, the hobby is often seen near large bodies of water. It nests using abandoned crows' nests, and during the breeding season it hunts for swallows and swifts to feed its young. After the young are able to fly and can hunt for themselves, Hobbies migrate with the swallows back to Africa.

KESTREL (*Falco tinnunculus*)

Once the UK's most common raptor, observed hovering by roads and motorways, this falcon has seen a decrease of 40 percent over the past two decades. A key reason for the decline is the lack of sufficient nest sites and suitable grasslands for hunting. Kestrels are characterized by a beautiful chestnut-red color over their bodies. The female has a red tail with bars, while the adult male has a grey head and grey tail with a black band at its tip. These birds are best known for hunting mice and voles by hovering, often descending in stages to drop on their prey.

RED KITE (*Milvus milvus*)

By 1903, Red Kites had been persecuted close to extinction, with the last few remaining in the mountains of Wales, when a farmer started to feed them. Now, with four feeding stations, there are 900 pairs in Wales. There have been very successful translocation programs in England, Scotland, and Northern Ireland, so kites are now seen soaring together in many places. Long wings, a long, forked tail, and red color make the Red Kite easy to identify. These birds are mainly scavengers, feeding on roadkill and animal remains. They have small feet for their body size, which limits the prey they can catch.

GOLDEN EAGLE (*Aquila chrysaetos*)

The Golden Eagle prefers remote moorlands and mountains in Scotland, usually nesting on cliff ledges. It soars over the Highlands, catching rabbits, hares, and birds with its very powerful feet. It also consumes carrion, in some areas being reliant on dead animals during the winter. Golden Eagles pair for life. Of the two eggs that the female lays, one chick rarely survives, the other fledging at about three-and-a-half months. Juveniles have a mottled white and brown tail with a black band, which turns brown over the years. The golden feathers that give this eagle its name are on the head and the neck.

PEREGRINE FALCON (*Falco peregrinus*)

Brought to low numbers by pesticides in the middle of the 20th century, the Peregrine has recovered dramatically. Many Peregrines are now urban birds, nesting on cathedrals, other tall buildings, and bridges. Probably the fastest living creature, the Peregrine hunts birds up to the size of large gulls, almost always on the wing. It has a short tail and long, pointed wings. The juveniles are brown, while the adults have a grey-blue back. In the UK, these birds are sedentary, but Peregrines in other areas can be migratory, and they are the most widely spread raptors worldwide.



ORNITHOLOGY

Editor

Glenn G. Mertz, BU1455

New Issues



Scott#	Denom	Common Name/Scientific Name	Family/Subfamily	Code
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ANGOLA

2018 December 10

A

The following Angola stamps were each made available in sheets of ten of the same stamp. In an email to Martin J. Frankevitz, New Issues Editor for Scott Publications (Amos Press) they received 120 sheets of ten stamps, for 120 different stamps. Therefore, there are 48 individual Scott numbers for each of the twelve sets I have listed for Angola for issues featuring birds, and 12 souvenir sheets.

2018 December 10 (Pigeons & Doves) (MS/4 & SS/1)

A

1452	300k	African Green-Pigeon, <i>Treron calvus</i>	Columbidae
1453	300k	Namaqua Dove, <i>Oena capensis</i>	Columbidae
1454	300k	Speckled Pigeon, <i>Columba guinea</i>	Columbidae
1455	300k	Ring-necked Dove, <i>Streptopelia capicola</i>	Columbidae
1548	SS 1200k	Laughing Dove, <i>Streptopelia senegalensis</i> *	Columbidae
	Margin	LR: Laughing Dove, <i>Streptopelia senegalensis</i>	Columbidae
		UR: Speckled Pigeon, <i>Columba guinea</i>	Columbidae
		LL: Ring-necked Dove, <i>Streptopelia capicola</i>	Columbidae

*If you are a reviewer of Kjell Scharning's website, Theme Birds on Stamps (www.birdtheme.org), you will see the genus of *Spilopelia*. This is a common, but not universal way of classifying these doves—Cornell may adopt this genu name in the future, but have not done so.

2018 December 10 (Owls) (MS/4 & SS/1)

A

1456	300k	Spotted Eagle-Owl, <i>Bubo africanus</i>	Strigidae
1457	300k	Akun Eagle-Owl, <i>Bubo leucostictus</i>	Strigidae
1458	300k	African Scops-Owl, <i>Otus senegalensis</i>	Strigidae
1459	300k	Pel's Fishing-Owl, <i>Scotopelia peli</i>	Strigidae
1549	SS 1200k	Verreaux's Eagle-Owl, <i>Bubo lacteus</i>	Strigidae
	Margin	R & LL: African-Scops-Owl, <i>Otus senegalensis</i>	Strigidae

2018 December 10 (Parrots) (Set/4 & SS/1)

A

1460	300k	Red-headed Lovebird, <i>Agapornis pullarius</i>	Psittaculidae
1461	300k	Meyer's Parrot, <i>Poicephalus meyeri</i> ssp. <i>reichenowi</i>	Psittacidae
1462	300k	Brown-necked Parrot, <i>Poicephalus robustus</i>	Psittacidae
1463	300k	Rueppell's Parrot, <i>Poicephalus rueppellii</i>	Psittacidae
1550	SS 1200k	Gray Parrot, <i>Psittacus erithacus</i>	Psittacidae
	Margin	R: Rosy-faced Lovebird, <i>Agapornis roseicollis</i> ssp. <i>catumbellus</i>	Psittaculidae

2018 December 10 (Kingfishers) (MS/4 & SS/1)

A

1464	300k	Woodland Kingfisher, <i>Halcyon senegalensis</i>	Alcedinidae
1465	300k	Malachite Kingfisher, <i>Corythornis cristatus</i>	Alcedinidae
1466	300k	African Pygmy-Kingfisher, <i>Ispidina picta</i>	Alcedinidae
1467	300k	Pied Kingfisher, <i>Ceryle rudis</i>	Alcedinidae
1551	SS 1200k	Gray-headed Kingfisher, <i>Halcyon leucocephala</i>	Alcedinidae
	Margin	R: Malachite Kingfisher, <i>Corythornis cristatus</i>	Alcedinidae

ANGOLA (continued)		2018 December 10 (Bee-eaters) (MS/4 & SS/1)	A
1468	300k	Blue-breasted Bee-eater, <i>Merops variegates</i>	Meropidae
1469	300k	White-throated Bee-eater, <i>Merops albicollis</i>	Meropidae
1470	300k	White-fronted Bee-eater, <i>Merops bullockoides</i>	Meropidae
1471	300k	Southern Carmine Bee-eater, <i>Merops nubicoides</i>	Meropidae
1552	SS 1200k	Rosy Bee-eater, <i>Merops malimbicus</i>	Meropidae
	Margin	R: Blue-cheeked Bee-eater, <i>Merops persicus</i>	Meropidae
		2018 December 10 (Woodpeckers) (Set/4 & SS/1)	A
1472	300k	Cardinal Woodpecker, <i>Chloropicus fuscescens</i>	Picidae
1473	300k	Golden-tailed Woodpecker, <i>Campethera abingoni</i>	Picidae
1474	300k	Elliot's Woodpecker, <i>Chloropicus elliotii</i>	Picidae (new)
1475	300k	Golden-crowned Woodpecker, <i>Chloropicus xantholophus</i>	Picidae (new)
1553	SS 1200k	Bennett's Woodpecker, <i>Campethera bennettii</i>	Picidae
	Margin	R: Rufous-necked Wryneck, <i>Jynx ruficollis</i>	Picidae (new)
		2018 December 10 (Hornbills) (Set/4 & SS/1)	A
1476	300k	Southern Yellow-billed Hornbill, <i>Tockus leucomelas</i>	Buceroridae
1477	300k	Piping Hornbill, <i>Bycanistes fistulator</i>	Bucerotidae
1478	300k	Crowned Hornbill, <i>Lophoceros alboterminatus</i>	Bucerotidae (new)
1479	300k	Southern Ground-Hornbill, <i>Bucorvus leadbeateri</i>	Bucorvidae
1554	SS 1200k	Trumpeter Hornbill, <i>Bycanistes bucinator</i>	Bucerotidae
	Margin	R: Trumpeter Hornbill, <i>Bycanistes bucinator</i>	Bucerotidae
		2018 December 10 (Warblers) (Set/4 & SS/1)	A
1480	300k	Red-capped Crombec, <i>Sylvietta ruficapilla</i>	Macrosphenidae (new)
1481	300k	Lesser Swamp-Warbler, <i>Acrocephalus gracilirostris</i>	Acrocephalidae (new)
1482	300k	Cape Crombec, <i>Sylvietta rufescens</i>	Macrosphenidae (new)
1483	300k	Green Hylia, <i>Hylia prasina</i>	Macrosphenidae (new)
1555	SS 1200k	Yellow-bellied Hyliota, <i>Hyliota flavigaster</i>	Hyliotidae
	Margin	R: Moustached Grass Warbler, <i>Melocichla mentalis</i>	Macrosphenidae
		2018 December 10 (Barbets) (Set/4 & SS/1)	A
1484	300k	L: Pied Barbet, <i>Tricholaema leucomelas</i>	Lybiidae
		R: Yellow-throated Tinkerbird, <i>Pogoniulus subsulphureus</i>	Lybiidae
1485	300k	Yellow-fronted Tinkerbird, <i>Pogoniulus chrysoconus</i>	Lybiidae
1486	300k	Crested Barbet, <i>Trachyphonus vaillantii</i>	Lybiidae
1487	300k	Black-backed Barbet, <i>Lybius minor</i>	Lybiidae (new)
1556	SS 1200k	Yellow-billed Barbet, <i>Trachyphonus purpuratus</i>	Lybiidae
	Margin	R: Crested Barbet, <i>Trachyphonus vaillantii</i>	Lybiidae
		2018 December 10 (Cuckoos) (Set/4 & SS/1)	A
1488	300k	Blue-headed Coucal, <i>Centropus monachus</i>	Cuculidae
1489	300k	Klass's Cuckoo, <i>Chrysococcyx klaas</i>	Cuculidae
1490	300k	Dideric Cuckoo, <i>Chrysococcyx caprius</i>	Cuculidae
1491	300k	Great Spotted Cuckoo, <i>Clamator glandarius</i>	Cuculidae
1557	SS 1200k	African Emerald Cuckoo, <i>Chrysococcyx cupreus</i>	Cuculidae
	Margin	R: African Cuckoo, <i>Cuculus gularis</i>	Cuculidae
		2018 December 10 (Water Birds) (MS/4 & SS/1)	A
1492	300k	Purple Heron, <i>Ardea purpurea</i>	Ardeidae
1493	300k	Great White Pelican, <i>Pelecanus onocrotalus</i>	Pelecanidae
1494	300k	Caspian Tern, <i>Hydroprogne caspia</i>	Laridae
1495	300k	Knob-billed Duck, <i>Sarkidiornis melanotos</i>	Anatidae (new)

ANGOLA (continued)

1558 SS 1200k Red-crested Pochard, *Netta rufina* Anatidae
 Margin R: Ruff, *Calidris pugnax* ♂ & ♀ (Cap: *Philomachus pugnax*) Scolopacidae

2018 December 10 (Birds of Prey) (MS/4 & SS/1)**A**

1496 300k African Fish-Eagle, *Haliaeetus vocifer* Accipitridae
 1497 300k Steppe Eagle, *Aquila nipalensis* Accipitridae
 1498 300k Tawny Eagle, *Aquila rapax* Accipitridae
 1499 300k Palm-nut Vulture, *Gypohierax angolensis* Accipitridae
 1559 SS 1200k Bateleur, *Terathopius ecaudatus* Accipitridae
 Margin R: Tawny Eagle, *Aquila rapax* Accipitridae

2018 December 10 (Endangered Species) (MS/4)**A**

1531 300k White-backed Vulture, *Gyps africanus* Accipitridae

ANTIGUA & BARBUDA**2018 October 1** (Magnificent Frigatebird) (MS/4 & SS/1)**A**

3424a \$5 Magnificent Frigatebird, *Fregata magnificens* (on perch) Frigateidae
 3424b \$5 Same species (in flight) Frigateidae
 3424c \$6 Same species (facing L) Frigateidae
 3424d \$6 Same species (facing R) Frigateidae
 3425 SS \$10 Same species ♂ & ♀ Frigateidae

AUSTRALIA**2018 September 18** (Items Starting w/ Same Letter) (Set/5 & Bklt/10) **B**

4853 \$1 Emu, *Dromaius novaehollandiae* (perf 14¾×14) (letter E) Casuariidae
 4857 \$1 Chestnut-eared Finch, *Taeniopygia castanotis* (perf 14¾×14) Estrildidae
 (Letter Z) (also now lumped under the name of Zebra Finch)
 4858 \$1 Emu, *Dromaius novaehollandiae* (die cut 11¼) (s/a) (letter E) Casuariidae
 4858a Bklt/10 (Sc#4858)
 4862 \$1 Chestnut-eared Finch, *Taeniopygia castanotis* (die cut 11¼) (s/a) Estrildidae
 4862a Bklt/10 (Sc#4862)

AUSTRALIAN ANTARCTIC TERR. 2018 September 25 (30th anniv. RSV Aurora) (Set/4 & SS/4) **B**

L220 \$1 Adelie Penguin, *Pygoscelis adeliae* Spheniscidae
 L222a SS/4 (Sc#L219–22)

BANGLADESH**2018 August** (Fish Eagle) (Block/4 & SS/1)**A**

A SS was issued containing one example of Sc#885a (perf 13½×14¼) sold for 60t, and a similar imperf SS having a sheet margins with the country's flag, the 2018 Praga Expo show emblem, and a serial number sold for 80t.

885a 20t Pallas's Fish-Eagle, *Haliaeetus leucoryphus* (on branches) Accipitridae
 885b 20t Same species (in flight heading down & R)
 885c 20t Same species (in flight heading up & R)
 885d 20t Same species (on branch)
 885 Block/4 (Sc#885a–d) (perf 13¼)

BOTSWANA**2018 August 30** (Kgalagadi Biodiversity) (Set/15 & 3ea SS/5)**A**

1049 30t Namaqua Sandgrouse, *Pterocles namaqua* Pteroclididae
 1050 50t Bateleur, *Terathopius ecaudatus* Accipitridae
 1053 2p Sociable Weaver, *Philetairus socius* Ploceidae
 1059 10p Knob-billed Duck, *Sarkidiornis melanotos* Anatidae
 1061 30p Chestnut-banded Plover, *Charadrius pallidus* Charadriidae
 1061a SS/5 (Sc#1049, 1050, 1053, 1059, 1061)

BRITISH ANTARCTIC TERR.**2018 November 1** (Penguins) (Set/12)**A**

551 1p Adelie Penguin, *Pygoscelis adeliae* Spheniscidae
 552 5p Macaroni Penguin, *Eudyptes chrysolophus* Spheniscidae
 553 10p Chinstrap Penguin, *Pygoscelis antarcticus* Spheniscidae

BRITISH ANTARCTIC TERR. (continued)

554	20p	Gentoo Penguin, <i>Pygoscelis papua</i>	Spheniscidae
555	50p	King Penguin, <i>Aptenodytes patagonicus</i>	Spheniscidae
556	66p	Adelie Penguin, <i>Pygoscelis adeliae</i>	Spheniscidae
557	76p	Adelie Penguin, <i>Pygoscelis adeliae</i>	Spheniscidae
558	£1	Macaroni Penguin, <i>Eudyptes chrysolophus</i>	Spheniscidae
559	£1.20	Chinstrap Penguin, <i>Pygoscelis antarcticus</i>	Spheniscidae
560	£2	Gentoo Penguin, <i>Pygoscelis papua</i>	Spheniscidae
561	£3.50	King Penguin, <i>Aptenodytes patagonicus</i>	Spheniscidae
562	£5	Emperor Penguin, <i>Aptenodytes forsteri</i>	Spheniscidae

2018 November 1 (Landscapes) (Set/4)

569	£1.01	Emperor Penguin, <i>Aptenodytes forsteri</i> (colony)	Spheniscidae	A
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CARIBBEAN NETHERLANDS **2018 July 20** (Hummingbirds) (MS/8+2 labels) (inscr. Sint Eustatius) **A**

105a	150c	U/I sp. (also LL margin)	Trochilidae
105b	150c	Ruby-throated Hummingbird, <i>Archilochus colubris</i> ♂	Trochilidae
105c	150c	Ruby-throated Hummingbird, <i>Archilochus colubris</i> ♀	Trochilidae
105d	150c	Rufous Hummingbird, <i>Selasphorus rufus</i>	Trochilidae
105e	150c	Antillean Crested Hummingbird, <i>Orthorhynchus cristatus</i>	Trochilidae
105f	150c	U/I sp. (also LR margin)	Trochilidae
105g	150c	U/I sp. (also Top margin)	Trochilidae
105h	150c	Broad-billed Hummingbird, <i>Cyanthus latirostris</i>	Trochilidae
Margin		Bot: Ruby-throated Hummingbird, <i>Archilochus colubris</i> ♂	Trochilidae

CENTRAL AFRICA **2018 November 20** (205th anniv. Alexander Wilson) (MS/4 & SS/1) **A**

a	900fr	Blue Hawk, <i>Falco cyaneus</i>	Falconidae
(Wilson listed this as Blue Hawk, but most avifauna recognize it as a Hen Harrier, <i>Circus cyaneus</i> , Accipitridae)			
b	900fr	Bot: American Avocet, <i>Recurvirostra americana</i>	Recurvirostridae
		Top: Roseate Spoonbill, <i>Platalea ajaja</i>	Threskiornithidae
c	900fr	†Passenger Pigeon, <i>Ectopistes migratorius</i>	Columbidae
d	900fr	Eurasian Griffon, <i>Gyps fulvus</i>	Accipitridae
	SS 3600fr	Eurasian Griffon, <i>Gyps fulvus</i>	Accipitridae
Margin		R: Hen Harrier, <i>Circus cyaneus</i> (Cap: <i>Falco cyaneus</i>)	Accipitridae

2018 December 20 (Owls) (MS/4 & SS/1)

a	900fr	Eurasian Eagle-Owl, <i>Bubo bubo</i>	Strigidae	A
b	900fr	Great Gray Owl, <i>Strix nebulosa</i>	Strigidae	
c	900fr	Long-eared Owl, <i>Asio otus</i>	Strigidae	
d	900fr	Short-eared Owl, <i>Asio flammeus</i>	Strigidae	
	SS 3600fr	Snowy Owl, <i>Bubo scandiacus</i>	Strigidae	
Margin		R: Great Gray Owl, <i>Strix nebulosa</i>	Strigidae	

2018 December 20 (Global Warming) (MS/4)

a	900fr	Adelie Penguin, <i>Pygoscelis adeliae</i>	Spheniscidae	A
d	900fr	Dovekie, <i>Alle alle</i>	Alcidae	

2018 December 20 (Pigeons) (MS/4 & SS/1)

a	850fr	Bolle's Pigeon, <i>Columba bollii</i>	Columbidae	A
b	850fr	Nilgiri Wood-Pigeon, <i>Columba elphinstonii</i>	Columbidae	(new)
c	850fr	Papuan Mountain-Pigeon, <i>Gymnophaps albertisii</i>	Columbidae	
d	850fr	European Turtle-Dove, <i>Streptopelia turtur</i>	Columbidae	
	SS 3600fr	Western Crowned-Pigeon, <i>Goura cristata</i>	Columbidae	
Margin		R: Papuan Mountain-Pigeon, <i>Gymnophaps albertisii</i>	Columbidae	

CENTRAL AFRICA (continued)			2018 December 20 (Hornbills) (MS/4 & SS/1)	A
a	900fr	Southern Ground-Hornbill, <i>Bucorvus leadbeateri</i>	Bucorvidae	
b	900fr	Knobbed Hornbill, <i>Rhyticeros cassidix</i>	Bucerotidae	
c	900fr	Wrinkled Hornbill, <i>Rhabdotorrhinus corrugatus</i>	Bucerotidae	
d	900fr	Southern Yellow-billed Hornbill, <i>Tockus leucomelas</i>	Bucerotidae	
	SS 3600fr	Wreathed Hornbill, <i>Rhyticeros undulates</i>	Bucerotidae	
	Margin	R: Knobbed Hornbill, <i>Rhyticeros cassidix</i>	Bucerotidae	
CHINA (Taiwan)			2018 October 3 (Birds) (MS/4)	A
4441a	\$7	Whiskered Tern, <i>Chlidonias hybrida</i> (in flight)	Laridae	
4441b	\$7	Same species (on branch)	Laridae	
4441c	\$8	Pied Avocet, <i>Recurvirostra avosetta</i> (standing facing L)	Recurvirostridae	
4441d	\$8	Same species (feeding facing R)		
CHRISTMAS ISLAND			2018 August 28 (Bird Illustrations) (Set/4 & SS/4)	A
570	\$1	Christmas Island Boobook, <i>Ninox natalis</i>	Strigidae	
		(This species now lumped under Southern Boobook that was previously named Morepork.)		
571	\$1	White-tailed Tropicbird, <i>Phaethon lepturus</i>	Phaethontidae	
572	\$2	Brown Goshawk, <i>Accipiter fasciatus</i>	Accipitridae	
573	\$2	Christmas Island White-eye, <i>Zosterops natalis</i>	Zosteropidae	
573a		SS/4 (Sc#570–73)		
COSTA RICA			2018 September 13 (200th anniv. Independence) (MS/6+3 labels)	A
701a	580col	Clay-colored Thrush, <i>Turdus grayi</i>	Turdidae	
701		MS/6+3 labels (2ea Sc#701a–c)		
CYPRUS			2018 September 27 (Birds) (Set/3)	A
1301	34c	European Goldfinch, <i>Carduelis carduelis</i>	Fringillidae	
1302	64c	European Greenfinch, <i>Carduelis chloris</i>	Fringillidae	
1303	€1	Common Chaffinch, <i>Fringilla coelebs</i>	Fringillidae	
FALKLAND ISLANDS			2018 October 18 (Migratory Birds) (2ea Vert Pair)	A
1230a	31p	Rockhopper Penguin, <i>Eudyptes chrysocome</i>	Spheniscidae	
1230b	76p	Same species	Spheniscidae	
1231a	£1.01	Sooty Shearwater, <i>Ardenna grisea</i>	Procellariidae	
1231b	£1.22	Same species	Procellariidae	
FAROE ISLANDS			2018 September 24 (Christmas) (Set/2)	C
719	10k	Northern Gannet, <i>Morus bassanus</i>	Sulidae	
FIJI			2011 August 15 (Pomegranate Tree & Birds) (Horiz Pair) (Update)	U C
1264a	65c	Small U/I sp.		
1264b	\$1.20	Small U/I sp.		
FRANCE			2018 June 10 (Birds) (Single, SS/4 & 2ea SS/2)	A
5453	80c	Eurasian Blue Tit, <i>Cyanistes caeruleus</i>	Paridae	
5454a	80c	European Robin, <i>Erithacus rubecula</i>	Muscicapidae	
5454b	80c	House Sparrow, <i>Passer domesticus</i>	Passeridae	
5454c	80c	Eurasian Magpie, <i>Pica pica</i>	Corvidae	
5454		SS/4 (Sc#5453, 5454a–c)		
5454d		SS/2 (Sc#5454a–b)		
5454e		SS/2 (Sc#5453, 5454c)		
		2018 June 20 (Tourism: Kaysersberg) (Single)		C
5456	80c	White Stork, <i>Ciconia ciconia</i>	Ciconiidae	

FRANCE (continued)		2018 July 6 (Camargue Region House) (Single)		B
5471	€1.30	Greater Flamingo, <i>Phoenicopterus roseus</i>	Phoenicopteridae	
FRENCH SOUTH. & ANTARCTIC TERR.		2018 June 7 (Penguins) (Set/3 & MS/4)		A
594	10c	Southern Rockhopper Penguin, <i>Eudyptes chrysocome</i>	Spheniscidae	
595	20c	King Penguin, <i>Aptenodytes patagonicus</i>	Spheniscidae	
596	30c	Gentoo Penguin, <i>Pygoscelis papua</i>	Spheniscidae	
597a	85c	Emperor Penguin, <i>Aptenodytes forsteri</i>	Spheniscidae	
597b	85c	King Penguin, <i>Aptenodytes patagonicus</i>	Spheniscidae	
597c	85c	Gentoo Penguin, <i>Pygoscelis papua</i>	Spheniscidae	
597d	85c	Southern Rockhopper Penguin, <i>Eudyptes chrysocome</i>	Spheniscidae	
		2018 October 17 (Alfred Faure, Crozet Island Base) (SS/1)		C
598	SS 95c	Wandering Albatross, <i>Diomedea exulans</i>	Diomedidae	
	Margin	LL: Emperor Penguin, <i>Aptenodytes forsteri</i>	Spheniscidae	
		MR: Great Shearwater, <i>Ardenna gravis</i>	Procellariidae	
		2019 January 1 (Penguins) (Horiz Pair + label)		A
Both captioned <i>Eudyptes chrysocome moseleyi</i> , but ssp. <i>moseleyi</i> was previously elevated to full species status.				
599a	95c	Moseley's Rockhopper Penguin, <i>Eudyptes moseleyi</i>	Spheniscidae	
599b	€1.35	Same species		
GERMANY		2018 July 12 (Garden Kingdom of Dessau-Wörlitz) (Horiz Pair)		C
3049	45c	Mute Swan, <i>Cygnus olor</i>	Anatidae	
3049a		Horiz Pair (Sc#3048–49)		
GREAT BRITAIN		2018 August 16 (250th anniv. <i>Endeavour</i> Expedition) (Set/6 & MS/4)		B
3757	(58p)	Red-tailed Tropicbird, <i>Phaethon rubricauda</i> (w/ Joseph Banks)	Phaethontidae	
3758a		(Horiz Pair (Sc#3757–58))		
3762	£1.45	Blue-black Grassquit, <i>Volatinia jacarina</i> (w/ Sydney Parkinson)	Thraupidae	
3762a		(Horiz Pair (Sc#3761–62))		
		2018 November 1 (Christmas) (MS/8 & MS/20)		C
3792e	£1.25	European Robin, <i>Erithacus rubecula</i> (w/ mailbox)	Muscicapidae	
3792		MS/8 (Sc#3792a–h) (perf 14½×15)		
3797	£1.25	Same species (photo) (die cut 14½×15) (s/a)	Muscicapidae	
3797a	£1.25	Same species (litho) (die cut 14½×15) (s/a) (w/label)	Muscicapidae	
3800b		MS/20+20 labels (Sc#3797a, 3798a, 3799a, 8ea Sc#3793b & 3794b)		
GREAT BRITAIN (Isle of Man)		2017 October 19 (12 Days of Christmas) (Block/12 & MS/12)		A
1904a	(52p)	Red-legged Partridge, <i>Alectoris rufa</i>	Phasianidae	
1904b	(52p)	European Turtle-Dove, <i>Streptopelia turtur</i>	Columbidae	
1904d	(52p)	Eurasian Blackbird, <i>Turdus merula</i>	Turdidae	
1904f	(52p)	Canada Goose, <i>Branta canadensis</i>	Anatidae	
1904g	(52p)	Mute Swan, <i>Cygnus olor</i>	Anatidae	
1904		Block/12 (Sc#1904a–l) (perf 12½)		
1905a	(52p)	Red-legged Partridge, <i>Alectoris rufa</i>	Phasianidae	
1905b	(52p)	European Turtle-Dove, <i>Streptopelia turtur</i>	Columbidae	
1905d	(52p)	Eurasian Blackbird, <i>Turdus merula</i>	Turdidae	
1905f	(52p)	Canada Goose, <i>Branta canadensis</i>	Anatidae	
1905g	(52p)	Mute Swan, <i>Cygnus olor</i>	Anatidae	
1905		MS/12 (Sc#1905a–l) (die cut 12¾) (s/a)		

GREAT BRITAIN (Jersey)		2018 May 25 (150th anniv, JSPCA) (Set/8)		A
2147	£2.64	Tawny Owl, <i>Strix aluco</i>	Strigidae	
		2018 September 3 (Birds) (SS/2 & SS/6)		A
2170	50p	Red-billed Chough, <i>Pyrhocorax pyrrhocorax</i>	Corvidae	
2171	50p	Yellowhammer, <i>Emberiza citronella</i>	Emberizidae	
2172	50p	Barn Owl, <i>Hirundo rustica</i>	Hirundinidae	
2173	50p	European Stonechat, <i>Saxicola rubicola</i>	Muscicapidae	
2173a		SS/2 (Sc#2170 & 2173)		
2174	50p	European Goldfinch, <i>Carduelis carduelis</i>	Fringillidae	
2175	50p	Eurasian Linnet, <i>Carduelis cannabina</i>	Fringillidae	
2175a		SS/6 (Sc#2170–75)		
GRENADA		2018 August 3 (Flora & Fauna) (Set/6)		A
4292	\$80	Grenada Dove, <i>Leptotila wellsi</i>	Columbidae	
GUINEA		2018 August 28 (Owls) (MS/4 & SS/1) (GU18412a&b)		A
a	12500fr	Barred Owl, <i>Strix varia</i>	Strigidae	
b	12500fr	Barn Owl, <i>Tyto alba</i>	Tytonidae	
c	12500fr	Elf Owl, <i>Micrathene whitneyi</i>	Strigidae	
d	12500fr	Northern Hawk-Owl, <i>Surnia ulula</i>	Strigidae	
	SS 50000fr	Great Horned Owl, <i>Bubo virginianus</i>	Strigidae	
	Margin	UL: Snowy Owl, <i>Bubo scandiacus</i>	Strigidae	
		Bot: Long-eared Owl, <i>Asio otus</i>	Strigidae	
		2018 August 28 (Stamp-on-Stamp) (MS/4) (GU18423a)		B
a	12500fr	American Kestrel, <i>Falco sparverius</i> (USA Sc#3044)	Falconidae	
d	12500fr	Nuthatch, <i>Sitta canadensis</i> (Algeria Sc#633)	Sittidae	
		2018 October 23 (Water Birds) (MS/4 & SS/1) (GU18521a&b)		A
a	12500fr	Canada Goose, <i>Branta canadensis</i>	Anatidae	
b	12500fr	Australian Pelican, <i>Pelecanus conspicillatus</i>	Pelecanidae	
c	12500fr	Great Blue Heron, <i>Ardea herodias</i>	Ardeidae	
d	12500fr	Mallard, <i>Anas platyrhynchos</i>	Anatidae	
	SS 50000fr	Great Egret, <i>Ardea alba</i>	Ardeidae	
	Margin	R: Mallard, <i>Anas platyrhynchos</i> ♂ & ♀	Anatidae	
		2018 October 23 (Climate Change) (MS/4) (GU18502a)		A
b	12500fr	Chinstrap Penguin, <i>Pygoscelis antarcticus</i>	Spheniscidae	
		2018 October 23 (Bee-eaters) (MS/4 & SS/1) (GU18508a&b)		A
a	12500fr	Little Bee-eater, <i>Merops pusillus</i>	Meropidae	
b	12500fr	Northern Carmine Bee-eater, <i>Merops nubicus</i>	Meropidae	
c	12500fr	Southern Carmine Bee-eater, <i>Merops nubicoides</i>	Meropidae	
d	12500fr	European Bee-eater, <i>Merops apiaster</i>	Meropidae	
	SS 50000fr	European Bee-eater, <i>Merops apiaster</i>	Meropidae	
	Margin	R: Same species	Meropidae	
		2018 October 23 (Arctic Animals) (MS/4 & SS/1) (GU18520a&b)		A
a	12500fr	Snowy Owl, <i>Bubo scandiacus</i>	Strigidae	
	SS 50000fr	R: Snowy Owl, <i>Bubo scandiacus</i>	Strigidae	
GUINEA-BISSAU		2018 July 17 (Birds of Prey) (MS/5+label & SS/1) (GB18604a&b)		A
a	640fr	Booted Eagle, <i>Hieraaetus pennatus</i>	Accipitridae	
b	640fr	Common Buzzard, <i>Buteo buteo</i>	Accipitridae	
c	640fr	Eurasian Kestrel, <i>Falco tinnunculus</i>	Falconidae	
d	640fr	Merlin, <i>Falco columbarius</i>	Falconidae	

GUINEA-BISSAU (continued)

e	640fr	Osprey, <i>Pandion haliaetus</i>	Pandionidae	
	Label	Red-tailed Hawk, <i>Buteo jamaicensis</i>	Accipitridae	
	SS 3300fr	Red-tailed Hawk, <i>Buteo jamaicensis</i>	Accipitridae	
	Label	Booted Eagle, <i>Hieraaetus pennatus</i>	Accipitridae	
	Margin	R: Merlin, <i>Falco columbarius</i>	Falconidae	
2018 August 10 (Owls) (MS/5 & SS/1) (GB18705a&b)				A
a	640fr	Elf Owl, <i>Micrathene whitneyi</i> (also Bot margin)	Strigidae	
b	640fr	Long-eared Owl, <i>Asio otus</i>	Strigidae	
c	640fr	Spectacled Owl, <i>Pulsatrix perspicillata</i>	Strigidae	
d	640fr	Lesser Sooty-Owl, <i>Tyto multipunctata</i> (also MR margin)	Tytonidae	
e	640fr	Barred Owl, <i>Strix varia</i>	Strigidae	
	Margin	ML: Northern Hawk-Owl, <i>Surnia ulula</i>	Strigidae	
	SS 3300fr	Northern Hawk-Owl, <i>Surnia ulula</i>	Strigidae	
	Margin	R: Long-eared Owl, <i>Asio otus</i>	Strigidae	
		Bot: Barred Owl, <i>Strix varia</i>	Strigidae	
2018 October 15 (Extinct Animals) (MS/5 & SS/1) (GB18904a&b)				B
c	640fr	Snail-eating Coua, <i>Coua delalandei</i>	Cuculidae	
	Margin	LL: Mascarene Parrot, <i>Mascarinus mascarin</i>	Psittaculidae	
	SS 3300fr	Mascarene Parrot, <i>Mascarinus mascarin</i>	Psittaculidae	
	Margin	LR: Snail-eating Coua, <i>Coua delalandei</i>	Cuculidae	
2018 October 15 (90th anniv. Roald Amundsen) (MS/5) (GB18908a)				B
a	640fr	Snowy Owl, <i>Bubo scandiacus</i>	Strigidae	
b	640fr	Wandering Albatross, <i>Diomedea exulans</i>	Diomedidae	
e	640fr	King Penguin, <i>Aptenodytes patagonica</i>	Spheniscidae	
2018 October 15 (Lighthouses) (MS/5 & SS/1) (GB18907a&b)				B
a	640fr	Common Loon, <i>Gavia immer</i>	Gaviidae	
b	640fr	Atlantic Puffin, <i>Fratercula arctica</i>	Alcidae	
c	640fr	Laughing Gull, <i>Leucophaeus atricilla</i>	Laridae	
d	640fr	Osprey, <i>Pandion haliaetus</i>	Pandionidae	
e	640fr	Gull-billed Tern, <i>Gelochelidon nilotica</i>	Laridae	
	SS 3300fr	LL: Trumpeter Swan, <i>Cygnus buccinator</i>	Anatidae	
2018 November 12 (Antarctica) (MS/5 & SS/1) (GB181002a&b)				A
a	640fr	Adelie Penguin, <i>Pygoscelis adeliae</i>	Spheniscidae	
e	640fr	Antarctica Tern, <i>Sterna vittata</i>	Laridae	
	Margin	Top: Gentoo Penguin, <i>Pygoscelis papua</i>	Spheniscidae	
	SS 3300fr	Gentoo Penguin, <i>Pygoscelis papua</i>	Spheniscidae	
	Margin	R: Adelie Penguin, <i>Pygoscelis adeliae</i>	Spheniscidae	
2018 November 12 (Hummingbirds) (MS/5 & SS/1) (GB181004a&b)				A
a	640fr	Violet-headed Hummingbird, <i>Klais guimeti</i>	Trochilidae	(new)
b	640fr	Allen's Hummingbird, <i>Selasphorus sasin</i>	Trochilidae	
c	640fr	Swallow-tailed Hummingbird, <i>Eupetomena macrourus</i>	Trochilidae	
d	640fr	White-chested Emerald, <i>Amazilia brevirostris</i>	Trochilidae	
e	640fr	Rufous Hummingbird, <i>Selasphorus rufus</i>	Trochilidae	
	Margin	Top: Green-breasted Mango, <i>Anthracothorax prevostii</i>	Trochilidae	
	SS 3300fr	Green-breasted Mango, <i>Anthracothorax prevostii</i>	Trochilidae	
	Margin	R: White-chested Emerald, <i>Amazilia brevirostris</i>	Trochilidae	

GUINEA-BISSAU (continued)			2018 November 12 (Kingfishers) (MS/5 & SS/1) (GB181005a&b)	A
a	640fr	Common Kingfisher, <i>Alcedo atthis</i>	Alcedinidae	
b	640fr	White-throated Kingfisher, <i>Halcyon smyrnensis</i>	Alcedinidae	
c	640fr	Giant Kingfisher, <i>Megaceryle maximus</i>	Alcedinidae	
d	640fr	Belted Kingfisher, <i>Megaceryle alcyon</i>	Alcedinidae	
e	640fr	Amazon Kingfisher, <i>Chloroceryle amazona</i>	Alcedinidae	
	Margin	Top: Pied Kingfisher, <i>Ceryle rudis</i>	Alcedinidae	
	SS 3300fr	Pied Kingfisher, <i>Ceryle rudis</i>	Alcedinidae	
	Margin	R: Belted Kingfisher, <i>Megaceryle alcyon</i>	Alcedinidae	
			2018 December 17 (Owls) (MS/5 & SS/1) (GB181106a&b)	A
a	640fr	Spectacled Owl, <i>Pulsatrix perspicillata</i>	Strigidae	
b	640fr	Barn Owl, <i>Tyto alba</i>	Tytonidae	
c	640fr	Snowy Owl, <i>Bubo scandiacus</i>	Strigidae	
d	640fr	Striped Owl, <i>Pseudoscops clamator</i>	Strigidae	
e	640fr	Northern Saw-whet Owl, <i>Aegolius acadicus</i>	Strigidae	
	Margin	Top: Eurasian Eagle-Owl, <i>Bubo bubo</i>	Strigidae	
	SS 3300fr	Eurasian Eagle-Owl, <i>Bubo bubo</i>	Strigidae	
	Margin	R: Striped Owl, <i>Pseudoscops clamator</i>	Strigidae	
			2018 December 17 (Parrots) (MS/5 & SS/1) (GN181107a&b)	A
a	640fr	Regent Parrot, <i>Polytelis anthopeplus</i>	Psittaculidae	
b	640fr	Eclectus Parrot, <i>Eclectus roratus</i>	Psittaculidae	
c	640fr	Blue-and yellow-Macaw, <i>Ara ararauna</i>	Psittacidae	
d	640fr	Black-headed Parrot, <i>Pionites melanocephalus</i>	Psittacidae	
e	640fr	Hyacinth Macaw, <i>Anodorhynchus hyacinthinus</i>	Psittacidae	
	Margin	Top: Sulphur-crested Cockatoo, <i>Cacatua galerita</i>	Cacatuidae	
	SS 3300fr	Sulphur-crested Cockatoo, <i>Cacatua galerita</i>	Cacatuidae	
	Margin	R: Hyacinth Macaw, <i>Anodorhynchus hyacinthinus</i>	Psittacidae	
GUYANA			2018 June 7 (Wildlife) (Set/5)	A
4556	\$25	Scarlet Macaw, <i>Ara macao</i>	Psittacidae	
4559	\$140	Black Curassow, <i>Crax alector</i>	Cracidae	
4560	\$150	White-throated Toucan, <i>Ramphastos tucanus</i>	Ramphastidae	
			2018 July 13 (National Bird) (MS/4 & SS/1)	A
4562a	\$200	Hoatzin, <i>Opisthocomus hoazin</i>	Opisthocomidae	
4562b	\$300	Same species	Opisthocomidae	
4562c	\$450	Same species	Opisthocomidae	
4562d	\$500	Same species	Opisthocomidae	
4563	SS \$850	Same species	Opisthocomidae	
			2018 November 20 (Tanagers) (MS/6 & SS/2)	A
4587a	\$200	Silver-breasted Tanager, <i>Tangara icterocephala</i> (previously on a Bernera British local issue)	Thraupidae	
4587b	\$200	Silver-beaked Tanager, <i>Ramphocelus carbo</i>	Thraupidae	
4587c	\$200	Bay-headed Tanager, <i>Tangara gyrola</i>	Thraupidae	
4587d	\$200	Scarlet Tanager, <i>Piranga olivacea</i>	Cardinalidae	
4587e	\$200	Golden-hooded Tanager, <i>Tangara larvata</i>	Thraupidae	
4587f	\$200	Guira Tanager, <i>Hemithraupis guira</i>	Thraupidae	Vol. 68(1)
4588a	SS \$500	Speckled Tanager, <i>Tangara guttata</i>	Thraupidae	Vol. 68(1)
4588b	SS \$550	Same species	Thraupidae	
			2018 November 20 (50th anniv. Apollo 11) (SS/2)	B
4592b	SS \$600	Bald Eagle, <i>Haliaeetus leucocephalus</i> (Apollo 11 patch)	Accipitridae	

HONDURAS		2017 October 11 (Plan International) (Set/8)		B
C1417	25l	Honduran Emerald, <i>Amazilia luciae</i>	Trochilidae	
INDONESIA		2016 October 21 (PhilaTaipei 2016 Exhibition) (SS/1)		A
2452	SS 10000r	Green Peafowl, <i>Pavo muticus</i>	Phasianidae	
		2017 January 21 (New Year: Year of Rooster) (Strip/3, SS/6, & SS/1)		A
2456a	3000r	Red Junglefowl, <i>Gallus gallus</i> (facing R)	Phasianidae	
2456b	3000r	Same species (rooster, hen, and chicks)	Phasianidae	
2456c	3000r	Same species (hen facing L)	Phasianidae	
2456d		SS/6 (2ea Sc#2456a–c)		
2457	SS 10000r	Same species (vertical)	Phasianidae	
		2018 June 5 (World Environment Day) (Horiz Pair)		C
B245b	3000r+500r	White-breasted Waterhen, <i>Amaurornis phoenicurus</i>	Rallidae	
JAPAN		2018 June 26 (50th anniv. Return of Bonin Islands) (MS/10)		B
4214g	82¥	Bonin White-eye, <i>Apalopteron familiare</i> (two birds)	Zosteropidae	
4214h	82¥	Same species (one bird)	Zosteropidae	
		2018 October 9 (Letter Writing Week) (Set/6)		A
4241	8¥	Peregrine Falcon, <i>Falco peregrinus</i>	Falconidae	
4243	70¥	Java Sparrow, <i>Lonchura oryzivora</i>	Estrildidae	
4243a		Vert Pair (Sc#4242–43)		
KOSOVO		2018 January 31 (Birds) (Set/2 & MS/5+1 label)		A
364	40c	Eurasian Hoopoe, <i>Upupa epops</i>	Upupidae	
365	€1	Eurasian Golden Oriole, <i>Oriolus oriolus</i>	Oriolidae	
366a	50c	Eurasian Kestrel, <i>Falco tinnunculus</i>	Falconidae	
366b	60c	Great Crested Grebe, <i>Podiceps cristatus</i>	Podicipedidae	
366c	80c	European Startling, <i>Sturnus vulgaris</i>	Sturnidae	
366		MS/5 (Sc#364–65 & Sc#366a–c)		
KYRGYZSTAN		2018 September 15 (Surma-Tash State Nature Reserve) (Single)		C
581	76s	Common Kestrel, <i>Falco tinnunculus</i>	Falconidae	
LIBERIA		2017 August 2 (African Penguins) (MS/4 & SS/3)		A
3225a	\$180	African Penguin, <i>Spheniscus demersus</i> (two penguins)	Spheniscidae	
3225b	\$180	Same species (one penguin, no feet showing)	Spheniscidae	
3225c	\$180	Same species (two grooming)	Spheniscidae	
3225d	\$180	Same species (one penguin, feet showing)	Spheniscidae	
3226a	SS \$180	Same species (water bkgrd)	Spheniscidae	
3226b	SS \$180	Same species (beach bkgrd)	Spheniscidae	
3226c	SS \$180	Same species (sky bkgrd)	Spheniscidae	
		2018 August 8 (African Guinea fowl) (MS/6 & SS/1)		A
3283a	\$170	Helmeted Guinea fowl, <i>Numida meleagris</i>	Numididae	
3283b	\$170	Crested Guinea fowl, <i>Guttera pucherani</i>	Numididae	
3283c	\$170	Vulturine Guinea fowl, <i>Acryllium vulturinum</i>	Numididae	
3283d	\$180	Helmeted Guinea fowl, <i>Numida meleagris</i>	Numididae	
3283e	\$180	Crested Guinea fowl, <i>Guttera pucherani</i>	Numididae	
3283f	\$180	Vulturine Guinea fowl, <i>Acryllium vulturinum</i>	Numididae	
3284	SS \$500	White-breasted Guinea fowl, <i>Agelastes meleagrides</i>	Numididae	

LIBERIA (continued)		2018 October 28 (Oxpeckers) (MS/6 & SS/1)		A
3295a	\$80	Red-billed Oxpecker, <i>Buphagus erythrorhynchus</i>	Buphagidae	
3295b	\$90	Same species, full vertical bird	Buphagidae	
3295c	\$100	Yellow-billed Oxpecker, <i>Buphagus africanus</i>	Buphagidae	
3295d	\$200	Red-billed Oxpecker, <i>Buphagus erythrorhynchus</i>	Buphagidae	
3295e	\$300	Yellow-billed Oxpecker, <i>Buphagus africanus</i>	Buphagidae	
3295f	\$400	Red-billed Oxpecker, <i>Buphagus erythrorhynchus</i>	Buphagidae	
3296	SS \$600	Red-billed Oxpecker, <i>Buphagus erythrorhynchus</i>	Buphagidae	
LIECHTENSTEIN		2019 March 4 (National Bird) (Vert Pair)		A
1777a	1.50fr	Golden Eagle, <i>Aquila chrysaetos</i> (In flight)	Accipitridae	
1777b	1.50fr	Same species, on ground looking backward	Accipitridae	
MALDIVE ISLANDS		2019 January 4 (Owls) (MS/4 & SS/1) (MLD181213ab)		A
a	20m	Crested Owl, <i>Lophotrix cristata</i>	Strigidae	
b	20m	Short-eared Owl, <i>Asio flammeus</i>	Strigidae	
c	20m	Snowy Owl, <i>Bubo scandiacus</i>	Strigidae	
d	20m	Giant Scops-Owl, <i>Otus gurneyi</i>	Strigidae	
	SS 60m	Spotted Owl, <i>Athene brama</i>	Strigidae	
	Margin	Bot: Snowy Owl, <i>Bubo scandiacus</i>	Strigidae	
		LR: Giant Scops-Owl, <i>Otus gurneyi</i>	Strigidae	
		2019 January 4 (Ibis) (MS/4 & SS/1) (MLD181201ab)		A
a	22m	Sacred Ibis, <i>Threskiornis aethiopicus</i>	Threskiornithidae	
b	22m	Buff-necked Ibis, <i>Theristicus caudatus</i>	Threskiornithidae	
c	22m	Madagascar Ibis, <i>Lophotibis cristata</i>	Threskiornithidae	
d	22m	Scarlet Ibis, <i>Eudocimus ruber</i>	Threskiornithidae	
	SS 70m	Scarlet Ibis, <i>Eudocimus ruber</i>	Threskiornithidae	
	Margin	Bot: Buff-necked Ibis, <i>Theristicus caudatus</i>	Threskiornithidae	
		2019 January 4 (Condors) (MS/4 & SS/1) (MLD181211a&b)		A
a	20m	Andean Condor, <i>Vultur gryphus</i> (on perch)	Cathartidae	
b	20m	Same species (in flight)	Cathartidae	
c	20m	California Condor, <i>Gymnogyps californianus</i> (wings spread)	Cathartidae	
d	20m	Same species (head)	Cathartidae	
	SS 60m	Andean Condor, <i>Vultur gryphus</i>	Cathartidae	
	Margin	Bot: Same species	Cathartidae	
MONGOLIA		2018 July 27 (Landscapes) (Set/7)		A
2899	1300t	Mongolian Ground-Jay, <i>Podoces hendersoni</i>	Corvidae	
MOZAMBIQUE		2019 February 10 (Rare Birds) (MS/4 & SS/1) (MOZ190109a&b)		A
a	116m	Turquoise-browed Motmot, <i>Eumomota superciliosa</i>	Momotidae	
b	116m	Andean Cock-of-the-Rock, <i>Rupicola peruvianus</i>	Cotingidae	
c	116m	Bare-faced Curassow, <i>Crax fasciolata</i>	Cracidae	
d	116m	Greater Bird-of-Paradise, <i>Paradisaea apoda</i>	Paradisaeidae	
	SS 300m	Resplendent Quetzal, <i>Pharomachrus mocinno</i>	Trogonidae	
	Margin	R: Hoatzin, <i>Opisthocomus hoazin</i>	Opisthocomidae	
		2019 February 10 (Hummingbirds) (MS/4 & SS/1) (MOZ190110a&b)		A
a	116m	Velvet-purple Coronet, <i>Boissonneaua jardini</i>	Trochilidae	
b	116m	Sparkling Violetear, <i>Colibri coruscans</i>	Trochilidae	
c	116m	Anna's Hummingbird, <i>Calypte anna</i>	Trochilidae	
d	116m	Crowned Woodnymph, <i>Thalurania colombica</i>	Trochilidae	
	SS 300m	Tufted Coquette, <i>Lophornis ornatus</i>	Trochilidae	
	Margin	R: Allen's Hummingbird, <i>Selasphorus sasin</i>	Trochilidae	

MOZAMBIQUE (continued)		2019 February 10 (Kingfishers) (MS/4 & SS/1) (MOZ190111a&b)	A
a	116m	Black-capped Kingfisher, <i>Halcyon pileata</i>	Alcedinidae
b	116m	Stork-billed Kingfisher, <i>Pelargopsis capensis</i>	Alcedinidae
c	116m	Black-capped Kingfisher, <i>Halcyon pileata</i>	Alcedinidae
d	116m	Blue-eared Kingfisher, <i>Alcedo meninting</i>	Alcedinidae
	SS 300m	Common Kingfisher, <i>Alcedo atthis</i>	Alcedinidae
	Margin	R: Stork-billed Kingfisher, <i>Pelargopsis capensis</i>	Alcedinidae
		2019 February 10 (Ducks) (MS/4 & SS/1) (MOZ190112a&b)	A
a	116m	Hooded Merganser, <i>Lophodytes cucullatus</i>	Anatidae
b	116m	Green-winged Teal, <i>Anas crecca</i>	Anatidae
c	116m	Canvasback, <i>Aythya valisineria</i>	Anatidae
d	116m	Wood Duck, <i>Aix sponsa</i>	Anatidae
	SS 300m	Mandarin Duck, <i>Aix galericulata</i>	Anatidae
	Margin	R: Common Goldeneye, <i>Bucephala clangula</i>	Anatidae
		2019 February 10 (Extinct Birds) (MS/4 & SS/1) (MOZ190115a&b)	A
a	116m	†Passenger Pigeon, <i>Ectopistes migratorius</i>	Columbidae
b	116m	†Dodo, <i>Raphus cucullatus</i>	Columbidae
c	116m	†Great Auk, <i>Pinguinus impennis</i>	Alcidae
d	116m	†Archaeopteryx, <i>Archaeopteryx lithographica</i>	†Archaeopterygidae
	SS 300m	L: †Confuciusornis, <i>Confuciusornis sanctus</i>	†Confuciusornithidae
		R: †Eoalulavis, <i>Eoalulavis hoyasi</i>	Clade: †Enantiornithes
	Margin	R: †Hokkaidornis, <i>Hokkaidornis abashiriensis</i>	†Plotopteridae
		2019 February 10 (Lighthouses) (MS/4) (MOZ190125a)	A
a	116m	American Herring Gull, <i>Larus smithsonianus</i>	Laridae
b	116m	Northern Gannet, <i>Morus bassanus</i>	Sulidae
c	116m	Black-headed Gull, <i>Chroicocephalus ridibundus</i>	Laridae
NIGER		2018 October 24 (Seabirds) (MS/4 & SS/1) (NIG18511a&b)	A
a	800fr	Dolphin Gull, <i>Leucophaeus scoresbii</i>	Laridae
b	800fr	Common Tern, <i>Sterna hirundo</i>	Laridae
c	800fr	Swallow-tailed Gull, <i>Creagrus furcatus</i>	Laridae
d	800fr	Long-tailed Cormorant, <i>Microcarbo africanus</i>	Phalacrocoracidae
	SS 3300fr	Red-billed Tropicbird, <i>Phaethon aethereus</i>	Phaethontidae
	Margin	UR: Pacific Gull, <i>Larus pacificus</i>	Laridae
		LL: Black Skimmer, <i>Rynchops niger</i>	Laridae
		LR: Great White Pelican, <i>Pelecanus onocrotalus</i>	Pelecanidae
		2018 October 24 (Kingfishers) (MS/4 & SS/1) (NIG18512a&b)	A
a	800fr	Stork-billed Kingfisher, <i>Pelargopsis capensis</i>	Alcedinidae
b	800fr	White-throated Kingfisher, <i>Halcyon smyrnensis</i>	Alcedinidae
c	800fr	Belted Kingfisher, <i>Megaceryle alcyon</i>	Alcedinidae
d	800fr	Woodland Kingfisher, <i>Halcyon senegalensis</i>	Alcedinidae
	SS 3300fr	Green-backed Kingfisher, <i>Actenoides monachus</i>	Alcedinidae
	Margin	LL & R: Common Kingfisher, <i>Alcedo atthis</i>	Alcedinidae
		2018 November 22 (Parrots) (MS/4 & SS/1) (NIG18605a&b)	A
a	800fr	Australian King-Parrot, <i>Alisterus scapularis</i>	Psittaculidae
b	800fr	Pesquet's Parrot, <i>Psittrichas fulgidus</i>	Psittaculidae
c	800fr	Red-fan Parrot, <i>Deroptryus accipitrinus</i>	Psittacidae
d	800fr	Kakapo, <i>Strigops habroptila</i>	Strigopidae
	SS 3300fr	Gang-gang Cockatoo, <i>Callocephalon fimbriatum</i>	Cacatuidae
	Margin	Bot: Kakapo, <i>Strigops habroptila</i>	Strigopidae

NIGER (continued)		2018 November 22 (Owls) (MS/4 & SS/1) (NIG18601a&b)	A
a	800fr	Boreal Owl, <i>Aegolius funereus</i>	Strigidae
b	800fr	Eastern Screech-Owl, <i>Megascops asio</i>	Strigidae
c	800fr	Sri Lanka Bay-Owl, <i>Phodilus assimilis</i>	Tytonidae
d	800fr	Eurasian Eagle-Owl, <i>Bubo bubo</i>	Strigidae
	SS 3300fr	Long-eared Owl, <i>Asio otus</i>	Strigidae
	Margin	LL: Eurasian Eagle-Owl, <i>Bubo bubo</i>	Strigidae
		LR: Eastern Screech-Owl, <i>Megascops asio</i>	Strigidae
		2018 November 22 (Antarctica) (MS/4) (NIG18622a)	A
a	800fr	Emperor Penguin, <i>Aptenodytes forsteri</i>	Spheniscidae
b	800fr	Snow Petrel, <i>Pagodroma nivea</i>	Procellariidae
ST. THOMAS & PRINCE IS.		2018 November 17 (Owls) (MS/4 & SS/1) (ST18510a&b)	A
a	31d	Long-eared Owl, <i>Asio otus</i>	Strigidae
b	31d	Tawny Owl, <i>Strix aluco</i>	Strigidae
c	31d	Northern Pygmy-Owl, <i>Glaucidium gnoma</i>	Strigidae
d	31d	Barred Owl, <i>Strix varia</i>	Strigidae
	SS 124d	Snowy Owl, <i>Bubo scandiacus</i>	Strigidae
	Margin	R: Barred Owl, <i>Strix varia</i>	Strigidae
		2018 March 13 (Extinct Species) (MS/4 & SS/1) (ST18114a&b)	A
a	31d	†Huia, <i>Heteralocha acutirostris</i>	Callaeidae
d	31d	†Mauritius Blue-Pigeon, <i>Alectroenas nitidissimus</i>	Columbidae
	SS 124d	R: †Laughing Owl, <i>Sceloglaux albigularis</i>	Strigidae
		2018 March 13 (Hornbills) (MS/4 & SS/1) (ST18113a&b)	A
a	31d	Rufous-necked Hornbill, <i>Aceros nipalensis</i>	Bucerotidae
b	31d	Wreath Hornbill, <i>Rhyticeros undulatus</i>	Bucerotidae
c	31d	Great Hornbill, <i>Buceros bicornis</i>	Bucerotidae
d	31d	Oriental Pied-Hornbill, <i>Anthracoceros albirostris</i>	Bucerotidae
	SS 124d	Knobbed Hornbill, <i>Rhyticeros cassidix</i>	Bucerotidae
	Margin	Bot: Great Hornbill, <i>Buceros bicornis</i>	Bucerotidae
		R: Knobbed Hornbill, <i>Rhyticeros cassidix</i>	Bucerotidae
		2018 March 13 (Birds of Prey) (MS/4 & SS/1) (ST18109a&b)	A
a	31d	White-tailed Eagle, <i>Haliaeetus albicilla</i>	Accipitridae
b	31d	Red Kite, <i>Milvus milvus</i>	Accipitridae
c	31d	Eurasian Kestrel, <i>Falco tinnunculus</i>	Falconidae
d	31d	Bald Eagle, <i>Haliaeetus leucocephalus</i>	Accipitridae
	SS 124d	Saker Falcon, <i>Falco cherrug</i>	Falconidae
	Margin	R: Eurasian Marsh-Harrier, <i>Circus aeruginosus</i>	Accipitridae
		2019 February 4 (Pigeons) (MS/4 & SS/1) (ST190103a&b)	A
a	31d	Oriental Turtle-Dove, <i>Streptopelia orientalis</i>	Columbidae
b	31d	Pied Imperial-Pigeon, <i>Ducula bicolor</i>	Columbidae
c	31d	Crested Pigeon, <i>Ocyphaps lophotes</i>	Columbidae
d	31d	Asian Emerald Dove, <i>Chalcophaps indica</i>	Columbidae
	SS 124d	Domestic Pigeon, <i>Columba livia</i> ssp. <i>domestica</i> (Cap: <i>Pombo cauda de leque</i>)	Columbidae
	Margin	R: Nicobar Pigeon, <i>Caloenas nicobarica</i>	Columbidae
SIERRA LEONE		2018 April 27 (205th anniv. Alexander Wilson) (MS/4 & SS/1)	B
a	9800le	Pine Warbler, <i>Setophaga pinus</i>	Parulidae
b	9800le	Gray Heron, <i>Ardea cinerea</i>	Ardeidae
c	9800le	Baltimore Oriole, <i>Icterus galbula</i>	Icteridae

SIERRA LEONE (continued)

d	9800le	Mountain Bluebird, <i>Sialia currucoides</i>	Turdidae	
	SS 40000le	Pileated Woodpecker, <i>Dryocopus pileatus</i>	Picidae	
	Margin	LL & R: Wild Turkey, <i>Meleagris gallopavo</i>	Phasianidae	
		LR: American Robin, <i>Turdus migratorius</i>	Turdidae	
2018 April 27 (Kingfishers) (MS/4 & SS/1) (SRL18307a&b)				A
a	9800le	Ruddy Kingfisher, <i>Halcyon coromanda</i>	Alcedinidae	
b	9800le	Forest Kingfisher, <i>Todiramphus macleayii</i>	Alcedinidae	
c	9800le	Pied Kingfisher, <i>Ceryle rudis</i>	Alcedinidae	
d	9800le	Common Kingfisher, <i>Alcedo atthis</i>	Alcedinidae	
	SS 40000le	Laughing Kookaburra, <i>Dacelo novaeguineae</i>	Alcedinidae	
	Margin	UR: Buff-breasted Paradise-Kingfisher, <i>Tanysiptera sylvia</i>	Alcedinidae	
		LR: Black-backed Dwarf-Kingfisher, <i>Ceyx erithaca</i>	Alcedinidae	
		LL: Common Kingfisher, <i>Alcedo atthis</i>	Alcedinidae	
2018 April 27 (Owls) (MS/4 & SS/1) (SRL18311a&b)				A
a	9800le	Pharaoh Eagle-Owl, <i>Bubo ascalaphus</i>	Strigidae	
b	9800le	Cape Eagle-Owl, <i>Bubo capensis</i>	Strigidae	
c	9800le	African Wood-Owl, <i>Strix woodfordii</i>	Strigidae	
d	9800le	Spotted Eagle-Owl, <i>Bubo africanus</i>	Strigidae	
	SS 40000le	Verreaux's Eagle-Owl, <i>Bubo lacteus</i>	Strigidae	
	Margin	Top: Barn Owl, <i>Tyto alba</i>	Tytonidae	
		R: Northern White-faced Owl, <i>Ptilopsis leucotis</i>	Strigidae	
		LL: Spotted Eagle-Owl, <i>Bubo africanus</i>	Strigidae	
2018 May 30 (Lighthouses) (MS/4 & SS/1) (SRL18407a&b)				B
a	9800le	Cory's Shearwater, <i>Calonectris diomedea</i> ssp. <i>borealis</i>	Procellariidae	
b	9800le	Wilson's Storm-Petrel, <i>Oceanites oceanicus</i>	Hydrobatidae	
c	9800le	Balearic Shearwater, <i>Puffinus mauretanicus</i>	Procellariidae	
d	9800le	Manx Shearwater, <i>Puffinus puffinus</i>	Procellariidae	
	SS 40000le	Fea's Petrel, <i>Pterodroma feae</i>	Procellariidae	
	Margin	Cory's Shearwater, <i>Calonectris diomedea</i> ssp. <i>borealis</i>	Procellariidae	
2018 May 30 (Seabirds) (MS/4 & SS/1) (SRL18411a&b)				A
a	9800le	European Shag, <i>Phalacrocorax aristotelis</i>	Phalacrocoracidae	
b	9800le	Northern Gannet, <i>Morus bassanus</i>	Sulidae	
c	9800le	Sooty Shearwater, <i>Ardenna grisea</i>	Procellariidae	
d	9800le	Brown Booby, <i>Sula leucogaster</i>	Sulidae	
	SS 40000le	Long-tailed Cormorant, <i>Microcarbo africanus</i>	Phalacrocoracidae	
	Margin	UL: Black-headed Gull, <i>Chroicocephalus ridibundus</i>	Laridae	
		LR: Cory's Shearwater, <i>Calonectris diomedea</i> ssp. <i>borealis</i>	Procellariidae	
2018 June 29 (Birds of Prey) (MS/4 & SS/1) (SRL18515a&b)				A
a	9800le	Osprey, <i>Pandion haliaetus</i>	Pandionidae	
b	9800le	Brown Snake-Eagle, <i>Circaetus cinereus</i>	Accipitridae	
c	9800le	African Harrier-Hawk, <i>Polyboroides typus</i>	Accipitridae	
d	9800le	Tawny Eagle, <i>Aquila rapax</i>	Accipitridae	
	SS 40000le	White-backed Vulture, <i>Gyps africanus</i>	Accipitridae	
	Margin	LL: Shikra, <i>Accipiter badius</i>	Accipitridae	
		UR: African Fish-Eagle, <i>Haliaeetus vocifer</i>	Accipitridae	
		LR: Lesser Kestrel, <i>Falco naumanni</i>	Falconidae	

SIERRA LEONE (continued)		2018 October 30 (Pigeons) (MS/4 & SS/1) (SRL18911a&b)	A
a	9800le	New Zealand Pigeon, <i>Hemiphaga novaeseelandiae</i>	Columbidae
b	9800le	Yellow-footed Pigeon, <i>Treron phoenicopterus</i>	Columbidae
c	9800le	Pheasant Pigeon, <i>Otidiphaps nobilis</i>	Columbidae
d	9800le	Papuan Mountain-Pigeon, <i>Gymnophaps albertisii</i>	Columbidae
	SS 40000le	Crested Pigeon, <i>Ocyphaps lophotes</i>	Columbidae
	Margin	Bot: Pheasant Pigeon, <i>Otidiphaps nobilis</i>	Columbidae
		2018 November 30 (Lighthouses) (MS/4 & SS/1) (SRL181002a&b)	U B
a	9800le	U/I gull	Laridae
	SS 40000le	Bot: U/I gull	Laridae
		2018 November 30 (Owls) (MS/4 & SS/1) (SRL181007a&b)	A
a	9800le	Great Gray Owl, <i>Strix nebulosa</i>	Strigidae
b	9800le	Barn Owl, <i>Tyto alba</i>	Tytonidae
c	9800le	Ural Owl, <i>Strix uralensis</i>	Strigidae
d	9800le	Great Horned Owl, <i>Bubo virginianus</i>	Strigidae
	SS 40000le	Tawny Owl, <i>Strix aluco</i>	Strigidae
	Margin	Bot: Great Gray Owl, <i>Strix nebulosa</i>	Strigidae
		2018 November 30 (Hummingbirds) (MS/4 & SS/1) (SRL181011a&b)	A
a	9800le	Lesser Violetear, <i>Colibri cyanotus</i>	Trochilidae
b	9800le	Brown Violetear, <i>Colibri delphinae</i>	Trochilidae
c	9800le	Rufous-tailed Hummingbird, <i>Amazilia tzacatl</i>	Trochilidae
d	9800le	White-vented Violetear, <i>Colibri serrirostris</i>	Trochilidae
	SS 40000le	Long-tailed Sylph, <i>Agelaiocercus kingii</i>	Trochilidae
	Margin	LL: Lesser Violetear, <i>Colibri cyanotus</i>	Trochilidae
		LR: Rufous-tailed Hummingbird, <i>Amazilia tzacatl</i>	Trochilidae
		Ctr: Brown Violetear, <i>Colibri delphinae</i>	Trochilidae
		2018 November 30 (Penguins) (MS/4 & SS/1) (SRL181012a&b)	A
a	9800le	Macaroni Penguin, <i>Eudyptes chrysolophus</i>	Spheniscidae
b	9800le	Top: Brown Skua, <i>Stercorarius antarcticus</i>	Stercorariidae
		Bot: Gentoo Penguin, <i>Pygoscelis papua</i>	Spheniscidae
c	9800le	Magellanic Penguin, <i>Spheniscus magellanicus</i>	Spheniscidae
d	9800le	Humboldt Penguin, <i>Spheniscus humboldti</i>	Spheniscidae
	SS 40000le	Yellow-eyed Penguin, <i>Megadyptes antipodes</i>	Spheniscidae
	Margin	LL: Brown Skua, <i>Stercorarius antarcticus</i>	Stercorariidae
		LR: Gentoo Penguin, <i>Pygoscelis papua</i>	Spheniscidae
		2018 November 30 (150th anniv. Robert Falcon Scott) (MS/4 & SS/1)	A
a	9800le	Emperor Penguin, <i>Aptenodytes forsteri</i> (Scott portrait)	Spheniscidae
c	9800le	Same species (ship in bkgrd)	Spheniscidae
	SS 40000le	Same species (Scott portrait)	Spheniscidae
		2018 December 28 (Birds of Prey) (MS/4 & SS/1) (SRL181102a&b)	A
a	9800le	Ural Owl, <i>Strix uralensis</i>	Strigidae
b	9800le	Merlin, <i>Falco columbarius</i>	Falconidae
c	9800le	California Condor, <i>Gymnogyps californianus</i>	Cathartidae
d	9800le	Eurasian Marsh-Harrier, <i>Circus aeruginosus</i>	Accipitridae
	SS 40000le	Southern Caracara, <i>Caracara plancus</i>	Falconidae
	Margin	R: Eurasian Marsh-Harrier, <i>Circus aeruginosus</i>	Accipitridae

SIERRA LEONE (continued)		2018 December 28 (Water Birds) (MS/4 & SS/1) (SRL181108a&b)	A
a	9800le	Western Swamphen, <i>Porphyrio porphyrio</i>	Rallidae
b	9800le	Wood Duck, <i>Aix sponsa</i>	Anatidae
c	9800le	Northern Lapwing, <i>Vanellus vanellus</i>	Charadriidae
d	9800le	Canada Goose, <i>Branta canadensis</i>	Anatidae
	SS 40000le	Common Crane, <i>Grus grus</i>	Gruidae
	Margin	R: Northern Lapwing, <i>Vanellus vanellus</i>	Charadriidae
		2019 January 30 (Rare Birds) (MS/4 & SS/1) (SRL190110a&b)	A
a	12500le	Cattle Egret, <i>Bubulcus ibis</i>	Ardeidae
b	12500le	Resplendent Quetzal, <i>Pharomachrus mocinno</i>	Trogonidae
c	12500le	Andean Cock-of-the-Rock, <i>Rupicola peruvianus</i>	Cotingidae
d	12500le	Great Curassow, <i>Crax rubra</i>	Cracidae
	SS 50000le	Indian Bustard, <i>Ardeotis nigriceps</i>	Otididae
	Margin	R: Red-crowned Crane, <i>Grus japonensis</i>	Gruidae
		2019 January 30 (Owls) (MS/4 & SS/1) (SRL190113a&b)	A
a	12500le	Barn Owl, <i>Tyto alba</i>	Tytonidae
b	12500le	Western Screech-Owl, <i>Megascops kennicottii</i>	Strigidae
c	12500le	Eurasian Pygmy-Owl, <i>Glaucidium passerinum</i>	Strigidae
d	12500le	Eurasian Eagle-Owl, <i>Bubo bubo</i>	Strigidae
	SS 50000le	Snowy Owl, <i>Bubo scandiacus</i>	Strigidae
	Margin	Ctr: Long-eared Owl, <i>Asio otus</i>	Strigidae
		R: Eurasian Eagle-Owl, <i>Bubo bubo</i>	Strigidae
		2019 January 30 (Water Birds) (MS/4 & SS/1) (SRL190117a&b)	A
a	12500le	Double-crested Cormorant, <i>Phalacrocorax auritus</i>	Phalacrocoracidae
b	12500le	African Jacana, <i>Actophilornis africanus</i>	Jacanidae
c	12500le	Eared Grebe, <i>Podiceps nigricollis</i>	Podicipedidae
d	12500le	Eurasian Spoonbill, <i>Platalea leucorodia</i>	Threskiornithidae
	SS 50000le	James's Flamingo, <i>Phoenicoparrus jamesi</i>	Phoenicopteridae
	Margin	R: Same species	Phoenicopteridae
		2019 February 27 (Indian Trains) (MS/4) (SRL190205a)	B
c	12500le	Himalayan Monal, <i>Lophophorus impejanus</i>	Phasianidae
		2019 February 27 (Endangered Species) (MS/4) (SRL190218a)	B
c	12500le	Galapagos Penguin, <i>Spheniscus mendiculus</i>	Spheniscidae
	Margin	L: Same species	Spheniscidae
TRISTAN DA CUNHA		2018 October 18 (Migratory Birds) (2ea Vert Pairs)	A
1147a	85p	Yellow-nosed Albatross, <i>Thalassarche chlororhynchos</i> (flying)	Diomedidae
1147b	85p	Same species (on nest)	Diomedidae
1148a	90p	Great Shearwater, <i>Ardenna gravis</i> (in flight)	Procellariidae
1148b	90p	Same species (in water)	Procellariidae
UZBEKISTAN		2018 (Birds Type of 2017) (Set/12)	A
845	650s	Rock Dove, <i>Columba livia</i>	Columbidae
846	800s	Thrush Nightingale, <i>Luscinia luscinia</i>	Muscicapidae
847	1000s	Mute Swan, <i>Cygnus olor</i>	Anatidae
848	1300s	Same species	Anatidae
849	1800s	Same species	Anatidae
850	2500s	Thrush Nightingale, <i>Luscinia luscinia</i>	Muscicapidae
851	2600s	Common Crane, <i>Grus grus</i>	Gruidae
852	2800s	White Stork, <i>Ciconia ciconia</i>	Ciconiidae
853	3500s	Common Quail, <i>Coturnix coturnix</i>	Phasianidae

UZBEKISTAN (continued)

854	4550s	White Stork, <i>Ciconia ciconia</i>	Ciconiidae	
855	7800s	Eurasian Magpie, <i>Pica pica</i>	Corvidae	
856	15800s	Eurasian Magpie, <i>Pica pica</i>	Corvidae	
2018 August 6 (Zomin Nature Reserve Flora & Fauna) (MS/8)				
861a	900s	Common Raven, <i>Corvus corax</i>	Corvidae	A
861f	3200s	Chukar, <i>Alectoris chukar</i>	Phasianidae	
2018 November 23 (Fauna) (Set/4)				
866	2700s	Common Rosefinch, <i>Carpodacus erythrinus</i>	Fringillidae	A
VATICAN CITY 2018 November 9 (Gioachino Rossini) (Single)				
1695	€2.40	Eurasian Magpie, <i>Pica pica</i> (stylized)	Corvidae	S C
2018 November 9 (Popes) (Set/2)				
1698	€1.15	European Goldfinch, <i>Carduelis carduelis</i> (Pope St. Zosimus)	Fringillidae	C

EUROPA STAMPS

Birds on stamps collectors should be able to gather flocks of birds for their collections in 2019. Each year the PostEurop Association (from 1960 to 1992, known as the European Conference of Postal and Telecommunications Administrations [CEPT]) sponsors the Europa joint stamp issues with a common design or theme and produced by the postal administrations of its member countries. This year the theme is “National Birds.”

Already this year we have seen Europa bird issues from Austria, Azores, Belarus, Cyprus, Czech Republic, Greece, Guernsey, Iceland, Ireland, Jersey, Kosovo, Liechtenstein, Lithuania, Luxembourg, Madeira, Malta, Moldova, Monaco, Montenegro, Netherlands, Norway, Poland, Portugal, Romania, Russia, Serbia, Spain, Spanish Andorra, Sweden, and Turkey. There surely are others.

On 24 April 2019, the Czech Republic issued a single Europa stamp produced in sheets of six depicting a pair of Common Kingfishers (*Alcedo atthis*). The stamp was designed by Jaromír Knotkovi and Libuše Knotkovi. The denomination is shown as “E,” which is equal to 39k.

The Common Kingfisher is also known as the Eurasian Kingfisher and has a wide distribution across Eurasia and North Africa. It is small, about the size of a sparrow, and has a relatively large head and long bill. It feeds mainly on fish, caught by diving, and has special visual adaptations to enable it to see prey under water.



NEW BIRDS IN THE PHILATELIC AVIARY

Charles E. Braun, BU1364

New Birds



†**CONFUCIONURNIS**, *Confuciusornis sanctus* Confuciusornithidae
Mozambique, 2019 February 10, not yet cataloged, 300m SS
(extinct 120 million years ago)

Length: 20 inches, sexes alike, resident. Dark body and pale wings and a long dark tail and a toothless bill.

Habitat: Treetops.

Range: Central China.

Reference: Ivanov, M., S. Hrdlickov, and R. Gregorova. *The Complete Encyclopedia of Fossils*.

ANDAMAN SERPENT-EAGLE, *Spilornis elgini* Accipitridae
Surinam, 2019 February 13, not yet cataloged, \$14

Length: 20 to 22 inches, sexes alike, resident. All white-spotted dark brown, paler below.

Habitat: Forest clearings and hillsides with scattered trees.

Range: Andaman Islands, India.

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



BESRA, *Accipiter virgatus* Accipitridae
Tonga, 2018 December 18, not yet cataloged, \$4.30

Length: 9 to 14 inches, sexes similar, resident. Brown above and streaked and barred whitish below with a dark throat stripe.

Habitat: Highland forest.

Range: Northern India to Taiwan, the Philippines, and Bali.

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



RED-LEGGED CRAKE, *Rallina fasciata* Rallidae
Palau, 2018 December 19, not yet cataloged, 75c

Length: 9 to 10 inches, sexes alike, resident. Brown above and black-barred white below with a cinnamon head, neck, and breast.

Habitat: Low wetlands and open hillsides.

Range: Northeastern India to the Philippines and the Moluccas.

Reference: del Hoyo, J., A. Elliott, and J. Sargatal, Eds. *Handbook of the Birds of the World, Volume 3*.



DUSKY TURTLE-DOVE, *Streptopelia lugens* Columbidae
Ethiopia, 2018, not yet cataloged, 60c

Length: 11 inches, sexes alike, resident. Dark brownish gray above and bluish gray head and below with black neck patches.

Habitat: Montane forest.

Range: Southeastern Sudan to Yemen and northern Malawi.

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



BAR-SHOULDERED DOVE, *Geopelia humeralis* Columbidae
Togo, 2019 February 25, not yet cataloged, 800fr

Length: 10 to 12 inches, sexes similar, resident. Scalloped light grayish brown above and pink and bluish gray below.

Habitat: Scrubby woodland.

Range: Southeastern New Guinea and western, northern and eastern Australia.

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

Birds of the World, Volume 3.



WHITE-BELLIED GO-AWAY-BIRD, *Corythaixoides leucogaster*
Musophagidae
Ethiopia, 2018, not yet cataloged, 40c

Length: 18 inches, resident. The male (shown) is gray with a white belly and a dark bill. The female has a yellow bill.

Habitat: Low-lying acacia steppe and savanna.

Range: Southern Sudan to Tanzania.

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

of the World, Volume 4.



GOLDEN MASKED-OWL, *Tyto aurantia* Tytonidae
Surinam, 2019 April 10, not yet cataloged, \$4.50

Length: 11 to 13 inches, sexes similar, resident. Blackish-brown mottled golden-buff above. Paler below.

Habitat: Rainforest.

Range: New Britain.

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

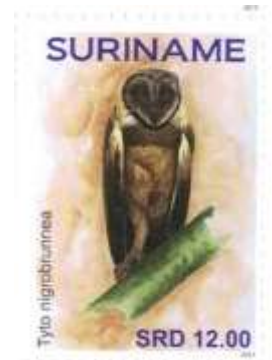
TALIABU OWL, *Tyto nigrobrunnea* Tytonidae
Surinam, 2019 April 10, not yet cataloged, \$12

Length: 13 inches, sexes similar, resident. White-spotted dark brown above and vermiculated golden brown below, with a pinkish brown facial disc.

Habitat: Rainforest and lowland forest.

Range: Taliabu Island, Indonesia.

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



MINHASSA MASKED-OWL, *Tyto inexpectata* Tytonidae

Niuafu'ou, 2018 December 18, not yet cataloged, \$5.20

Length: 12 inches, sexes alike, resident. Black and rusty above and black-spotted rusty below.

Habitat: Rainforest.

Range: Northern and north-central Sulawesi.

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

**SULAWESI OWL, *Tyto rosenbergii*** Tytonidae

Surinam, 2019 April 10, not yet cataloged, \$18

Length: 15 to 18 inches, sexes similar, resident. White-spotted and speckled blackish gray above and black-spotted buffy below.

Habitat: Lightly wooded cultivation.

Range: Sulawesi and neighboring islands.

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

**RUFIOUS-LEGGED OWL, *Strix rufipes*** Strigidae

Marshall Islands, 2018 December 21, not yet cataloged, \$1.25

Length: 13 to 15 inches, sexes alike, resident. Dark rufous brown above and barred buffy white below with a rusty facial disc.

Habitat: Dense, moist forest.

Range: Southern and central Chile and Argentina.

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

**VIOLET-HEADED HUMMINGBIRD, *Klais guimeti*** Trochilidae

Guinea-Bissau, 2018 November 12, not yet cataloged, 640fr

Length: 4 inches, resident. The male (shown) is bronzy green with a violet head. The female is pale gray below.

Habitat: Tall humid forest and second growth.

Range: Eastern Honduras to West-central Bolivia'

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

**VELVET-PURPLE CORONET, *Boissonneaua jardini*** Trochilidae

Mozambique, 2019 February 10, not yet cataloged, 116m

Length: 5 inches, sexes similar, resident. Bluish green above and purplish blue below with a velvety black head and throat.

Habitat: Wet mossy forest and forest borders,

Range: Andes of western Colombia and northwestern Ecuador.

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



BLACK-BREASTED PUFFLEG, *Eriocnemis nigrivestis* Trochilidae
Ecuador, 2018 December 27, not yet cataloged, 75c

Length: 4 inches, resident. The male (shown) is blackish with a violet-blue throat patch. The female is bronze green above and golden green below with a light blue gular patch.

Habitat: Mountain ridges.

Range: Northwestern Ecuador.

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



SCINTILLANT HUMMINGBIRD, *Selasphorus scintilla* Trochilidae
St Thomas and Prince Islands, 2019, not yet cataloged, 31d

Length: 3 inches, resident. The male (shown) is green above with a fiery red gorget and white collar. The female is white below with rufous flanks and has a gray-speckled buff throat.

Habitat: Forest edges, scrub, hedgerows, and plantations.

Range: North-central Costa Rica and western Panama.

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



RED-FRONTED TINKERBIRD, *Pogoniulus pusillus* Lybiidae
Ethiopia, 2018, not yet cataloged, 3b

Length: 4 inches, sexes alike, resident. Streaky dark above and light olive-grayish below with a red forehead and a yellow throat and rump.

Habitat: Dry woodland and scrub.

Range: Eritrea to eastern South Africa.

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



HAIRY-BREASTED BARBET, *Tricholaema hirsuta* Lybiidae
Angola, 2018 December 10, not yet cataloged, 300k

Length: 7 inches, sexes similar, resident. Yellow-spotted black above and yellowish or rufous below with “hairy” feathers on the throat and breast.

Habitat: Forest and forest edges.

Range: Sierra Leone to Kenya and northwestern Angola.

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



BLACK-BILLED BARBET, *Lybius guifsobalito* Lybiidae
Ethiopia, 2018, not yet cataloged, 2b

Length: 7 inches, sexes alike, resident, Black with a red forehead, face, and breast.

Habitat: Open woodland,

Range: Southern Uganda to Namibia and eastern South Africa.

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

**GOLDEN-CROWNED WOODPECKER, *Chloropicus xantholophus***

Picidae

Angola, 2018 December 10, not yet cataloged, 300k

Length: 10 inches, resident. The male (shown) is olive-brown above and heavily barred whitish below with a black and white head and a yellow crown. The female lacks the yellow crown.

Habitat: Lowland forest and forest edges.

Range: Southwestern Cameroon to western Kenya and northwestern Angola.

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

**WHITE-CRESTED ELAENIA, *Elaenia albiceps*** Tyrannidae

Ecuador, 2018 December 27, not yet cataloged, \$3

Length: 6 inches, sexes alike, migratory. Dingy olive-gray above and pale grayish below with a white coronal stripe.

Habitat: Scrub, woodland borders, and gardens.

Range: Breeds from southwestern Colombia to Tierra del Fuego. Winters from Ecuador to northern Argentina.

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

RED-SHOULDERED CUCKOO-SHRIKE, *Campephaga phoenicea* Campephagidae

Liberia, 2019 March 13, not yet cataloged, \$300

Length: 8 inches, resident. The male (shown) is black with red shoulders. The female is gray-brown above and black-barred white below.

Habitat: Forest, wooded grassland, and thickets in savannas.

Range: Senegal to Eritrea and western Kenya,

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

**GHANA CUCKOO-SHRIKE, *Lobotos lobatus*** Campephagidae

Liberia, 2019 March 13, not yet cataloged, \$300

Length: 8 inches, resident. The male (shown) is olive-yellow above and orange-yellow below with a black head and an orange cheek patch. The female is yellow below.

Habitat: Canopy of primary forest or rainforest.

Range: Eastern Sierra Leone to southwestern Ghana.

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

ROCK NUTHATCH, *Sitta neumayer* Sittidae

Greece, 2019 May 9, not yet cataloged, 90c

Length: 5 inches, sexes alike, resident. Light gray above and creamy below with a black eye stripe.

Habitat: Rocky areas.

Range: Croatia to Iran.

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





CAPE CROMBEC, *Sylvietta rufescens* Macrosphenidae
Angola, 2018 December 10, not yet cataloged, 340k

Length: 4 inches, sexes alike resident. Grayish above and pale cinnamon below with a pale superciliary.

Habitat: Dry savannah with bushes or scrub.

Range: Southern D. R. Congo to South Africa.

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



RED-CAPPED CROMBEC, *Sylvietta ruficapilla* Macrosphenidae
Angola, 2018 December 10, not yet cataloged, 340k

Length: 5 inches, sexes alike, resident. Gray above and whitish below with a chestnut face and collar.

Habitat: Wooded savanna.

Range: Southeastern Gabon to central Angola and Mozambique.

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



GREEN HYLIA, *Hylia prasina* Macrosphenidae
Angola. 2018 December 10, not yet cataloged, 340k

Length: 5 inches, sexes alike, resident. Dark olive-green above and olive-gray below with a pale yellow supercilium.

Habitat: Forest undergrowth.

Range: Southwestern Senegal to western Kenya and northern Angola.

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



LESSER SWAMP-WARBLE, *Acrocephalus gracilirostris*
Acrocephalidae
Angola, 2018 December 10, not yet cataloged, 340k

Length: 7 inches, sexes alike, resident. Warm brown above and buff below with a black eye stripe.

Habitat: Reed beds and grassy and bushy wetlands.

Range: Southern Sudan to Angola and South Africa.

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



YELLOW-BELLIED HYLIA, *Hylia flavigaster* Hyltiotidae
Angola, 2018 December 10, not yet cataloged, 1200k SS

Length: 5 inches, sexes similar, resident. Black above and yellow below with a white wing patch.

Habitat: Wooded moist savanna.

Range: Gambia to Kenya, Namibia, and southern Mozambique.

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



CUBAN ORIOLE, *Icterus melanopsis* Icteridae
Cuba, 2018 November 4, not yet cataloged, 65c

Length: 8 inches, sexes similar, resident. Black with yellow rump, thighs, and shoulders.

Habitat: Woodland, parks, and gardens.

Range: Cuba and Isle of Pines.

Reference: del Hoyo, J., A. Elliott, and J. Sargatal, Eds. *Handbook of the Birds of the World, Volume 16*.



SCARLET-BELLIED MOUNTAIN-TANAGER, *Anisognathus igniventris*

Thraupidae

Ecuador, 2018 December 27, not yet cataloged, 50c

Length: 6 inches, sexes similar, resident. Slaty black with orange-red neck patches and belly.

Habitat: Montane forest and elfin woodland.

Range: Southwestern Venezuela to northern Peru.

Reference: del Hoyo, J., A. Elliott, and J. Sargatal, Eds. *Handbook of the Birds of the World, Volume 16*.

MORE EUROPA BIRDS

On 9 May 2019, Montenegro issued a single stamp and a MS/1 as part of the Europa stamp series depicting a male and female Western Capercaillie (*Tetrao urogallus*). This bird is also known as the Wood Grouse and is the largest member of the grouse family.

The largest recorded specimen weighed 16 lb (7.2 kg). The species shows extreme sexual dimorphism, with the male twice the size of the female. Found across Eurasia, this ground-living forest bird is renowned for its mating display. Several subspecies have been described.

The stamp was designed by Zoran Popović and printed by Forum – Novi Sad.



MARINE INVERTEBRATES

Editor

Ian Hunter, BU1619

New Listings



Scott#	Denom	Common Name/Scientific Name	Family/Subfamily	Code
AUSTRALIA 2019 January 17 (Writers of Children's Books) (Set/5 & Bklt/10)				
4906	\$1	U/I Shells & Starfish (book design) (<i>Magic Beach</i> by Alison Lester) (perf 14×14¾)		U C
4911	\$1	U/I Shells & Starfish (book design) (<i>Magic Beach</i> by Alison Lester) (die cut 11¼)		U C
4911a		Bklt/10 (Sc#4911)		
CAYMAN ISLANDS 2015 December 2 (Christmas) (St/4)				
1161	20c	Stylized Crab (w/ Christmas tree & presents) (children art by Arianna Anglin)		S C
2018 November 23 (Christmas Music) (Set/4 & Bklt/10)				
1212	25c	Stylized Starfish (on beach) ("We Three Kings of Orient Are") (perf 14)		S A
1214	\$1.50	Stylized Pecten (on beach) ("Away in a Manger") (perf 14)		S A
1216	25c	Stylized Starfish (on beach) ("We Three Kings of Orient Are") (die cut 10×9¾)		S A
1216a		Bklt/10 (Sc#1216)		
GRENADA 2018 October 10 (Fish) (MS/4)				
4300	Margin	L: U/I Gorgonians		U Z
INDONESIA 2017 September 7 (Corals & Fish) (Pair & SS/2)				
2470a	5000r	Various U/I Corals (w/ fish) (1/2)		U B
2470b	5000r	Various U/I Corals (w/ fish) (2/2)		U B
2471a	SS 10000r	Various U/I Corals (w/ fish) (1/2)		U B
2471b	SS 10000r	Various U/I Corals (w/ fish) (2/2)		U B
JAPAN 2018 June 1 (Greetings) (MS/10)				
4209g	82¥	Stylized Crabs (beach scene)		S C
2018 July 4 (Jellyfish) (MS/10)				
4215a-j	82¥	Various U/I Jellyfish		U A
2018 August 29 (National Sports Festival) (MS/10)				
4227b	82¥	Stylized Crabs		S A
KOREA (South) 2018 November 21 (Women Divers of Jeju) (Vert Pair)				
2537b	330w	Two divers harvesting U/I Shells		U B
MALAYSIA 2018 June 5 (Sabah Tourist Attractions) (Set/2)				
1762	80c	U/I Coral reef (w/ bird & orangutan)		U B
MALDIVIVE ISLANDS 2016 June 13 (Personalized Stamps) (Single & SS/1)				
3653	10r	Coral reef (Gaafu Dhaalu Atoll) (perf 13×13¼)		U A
3653a		SS/1 (Sc#3653) (perf 13¼)		
2016 September 8 (Renaissance Art) (MS/4)				
3747b	20r	Stylized Shell (Ptg: <i>The Birth of Venus</i> by Sandro Botticelli)		S B
2016 October 17 (Underwater Life) (MS/10)				
3767b	5r	U/I Coral Reef (w/ fish)		U A
3767c	5r	U/I Sea Anemone (w/ fish)		U A

MALDIVE ISLANDS (continued)

3767f	5r	U/I Coral (w/ Moray Eel)		U A
3767g	5r	U/I Coral Reef		U A
3767j	5r	U/I Octopus		U A

2016 October 17 (Wildlife) (Set/3)

3771	15r	U/I Hermit Crab		U A
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2016 November 17 (Corals) (MS/4 & SS/1)

3776a	20r	Lesser Valley Coral, <i>Platygyra daedalea</i>	Merulinidae	A
3776b	20r	Orange Tube Coral, <i>Tubastrea coccinea</i>	Dendrophylliidae	A
3776c	20r	Staghorn Coral, <i>Acropora cervicornis</i>	Acroporidae	A
3776d	20r	Kenya Tree Coral, <i>Capnella thyrsoidea</i>	Nephtheidae	A
3786	SS 60r	Gorgonian Fan, <i>Annella mollis</i>	Subergorgiidae	A

2016 December 28 (*Finding Dory* Cartoon Characters) (Block/6)

3794e	20r	Stylized Octopus (Hank)		S A
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MEXICO**2018 December 7** (Caldo de Piedra– Stone Soup) (Horiz Pair)

3130	7p	U/I Seafood & Shrimp (bowl of soup)		U B
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MOROCCO**2015 June 9** (Marine Life) (Bklt/10)

1205f	9d	Green Ormer, <i>Haliotis tuberculata</i>	Haliotidae	A
1205i	9d	Common Octopus, <i>Octopus vulgaris</i>	Octopodidae	A
1205j	9d	Common Cuttlefish, <i>Sepia officinalis</i>	Sepiidae	A

NEW CALEDONIA**2018 November 7** (Fauna) (Horiz Strip/3)

1247a	75fr	Tadpole Shrimp, <i>Triops longicaudatus</i> ssp. <i>intermedius</i>	Triopsidae	A
1247c	75fr	Deep Water Snail, <i>Tuba valkyrie</i>	Mathildidae	A

PALAU**2018 July 5** (Palau Nautilus) (MS4 & SS/2)

1383a	\$2	Palau Nautilus, <i>Nautilus belauensis</i> (one facing L/one facing R)	Nautilidae	A
1383b	\$2	Same species (one facing L)	Nautilidae	A
1383c	\$2	Same species (two facing L)	Nautilidae	A
1383d	\$2	Same species (one facing R)	Nautilidae	A
1384a	SS \$3	Palau Nautilus, <i>Nautilus belauensis</i> (facing R)	Nautilidae	A
1384b	SS \$3	Same species (facing L)	Nautilidae	A

2018 November 9 (Giant Clams) (MS/4 & SS/1)

1393a	\$1	Giant Clam, <i>Tridacna gigas</i>	Tridacnidae	A
1393b	\$1.50	Same species	Tridacnidae	A
1393c	\$2	Same species	Tridacnidae	A
1393d	\$2.50	Same species	Tridacnidae	A
1394	SS \$4	Giant Clam, <i>Tridacna gigas</i>	Tridacnidae	A

UNITED STATES**2017 March 29** (Coral Reefs) (Strip/4 & Coil Strip/4)

5363	(35c)	Stylized Elkhorn Coral (w/ French Angelfish)		S B
5364	(35c)	Stylized Brain Coral (w/ Spotted Moray Eel)		S B
5365	(35c)	Stylized Pillar Coral (w/Coney Grouper & Neon Gobies)		S B
5366	(35c)	Stylized Staghorn Coral (w/ Blue-striped Grunts)		S B
5366a		Horiz or Vert Strip/4 (Sc#5363–66) (die cut 11¼×10¾)		
5367	(35c)	Stylized Pillar Coral (w/Coney Grouper & Neon Gobies)		S B
5368	(35c)	Stylized Staghorn Coral (w/ Blue-striped Grunts)		S B
5369	(35c)	Stylized Elkhorn Coral (w/ French Angelfish)		S B
5370	(35c)	Stylized Brain Coral (w/ Spotted Moray Eel)		S B
5370a		Horiz Strip/4 (Sc#5367–70) (die cut 9½ vert) (coil)		



ICHTHYOLOGY

Editor

J. Dale Shively, BU1832

New Listings



Scott#	Denom	Common Name/Scientific Name	Family/Subfamily	Code
ALBANIA 2018 December 14 (Fish) (Horiz Pair)				
3023a	5l	Sturgeon, <i>Acipenser sturio</i>	Acipenseridae	A
3023b	190l	Sea Trout, <i>Salmo trutta</i>	Salmonidae	A
CHINA (Taiwan) 2018 November 15 (Blue & White Porcelain) (Set/4)				
4447	\$6	Stylized Koi	Cyprinidae	S B
ECUADOR 2018 December 11 (San Francisco Univ. Scientific Contrib.) (MS/9)				
2224a	25c	Whale Shark, <i>Rhincodon typus</i>	Rhincodontidae	A
FINLAND 2018 February 28 (WWF) (Vert Strip/3)				
1562c	€1.40	Atlantic Salmon, <i>Salmo salar</i>	Salmonidae	A
2018 June 6 (Fish) (Horiz Pair)				
1567a	€1.50	Pike-Perch (Zander), <i>Sander lucioperca</i>	Percidae	A
1567b	€1.50	Vendace, <i>Coregonus albula</i>	Salmonidae	A
GREENLAND 2018 May 25 (Fish) (Set/2)				
788	12k	Atlantic Mackerel, <i>Scomber scombrus</i> (pale buff bkgrd)	Scombridae	A
789	16k	Atlantic Herring, <i>Clupea harengus</i> (pale buff bkgrd)	Clupeidae	A
790a	12k	Atlantic Mackerel, <i>Scomber scombrus</i> (pale blue bkgrd)	Scombridae	A
790b	16k	Atlantic Herring, <i>Clupea harengus</i> (pale blue bkgrd)	Clupeidae	A
790		SS/2 (Sc#790a–b) (perf 12½×13)		
INDONESIA 2017 September 7 (Corals & Fish) (Pair & SS/2)				
2470a	5000r	Clown Anemonefish, <i>Amphiprion ocellaris</i> (no. 1/2) U/I reef fish	Pomacentridae	B U C
2470b	5000r	UR: Yellow Tang, <i>Zebrasoma flavescens</i> (no. 2/2) UL: Bartlett's Anthias, <i>Pseudanthias bartlettorum</i> ML: Bartlett's Anthias, <i>P. bartlettorum</i> (?) (color phase) Bkgrd: U/I reef fish	Acanthuridae Serranidae Serranidae	B B U B U C
2471a	10000r	Clown Anemonefish, <i>Amphiprion ocellaris</i> (like Sc#2470b)	Pomacentridae	B
2471b	10000r	Yellow Tang, <i>Zebrasoma flavescens</i> (like Sc#2470a)	Acanthuridae	B
2471		SS/2 (Sc#2471a–b) Margin L & Bkgrd: U/I reef fish		U Z
KAZAKHSTAN 2018 September 7 (West Kazakhstan Region) (SS/2+2 labels)				
860	Margin	LR: Balkhash Perch, <i>Perca schrenkii</i>	Percidae	C Z
KOREA (South) 2018 November 21 (Women Divers of Jeju) (Vert Pair)				
2537b	330w	Bkgrd: U/I fish		U C
MALDIVE ISLANDS 2016 June 13 (Photographs of Atolls) (20ea SS/1)				
3647a	Margin	LR: Scrawled Butterflyfish, <i>Chaetodon meyeri</i> (Alifu Alifu)	Chaetodontidae	Z
3648a	Margin	LR: Giant Manta, <i>Mobula birostris</i> (Alifu Dhaalu)	Myliobatidae	Z
3649a	SS 10r	U/I Sharks (Baa)		U C
	Margin	LR: Coral Hawkfish, <i>Cirrhichthys oxycephalus</i>	Cirrhitidae	Z
3650a	Margin	LR: Orange-spine Tang, <i>Naso lituratus</i> (Dhaalu)	Balistidae	Z

MALDIVE ISLANDS (continued)

3651a	Margin	LR: Blackside Hawkfish, <i>Paracirrhites forsteri</i> (Faafu)	Cirrhitidae	Z
3652a	Margin	LR: Bignose Unicornfish, <i>Naso vlamingii</i> (Gaafu Alifu)	Acanthuridae	Z
3653a	Margin	LR: Moorish Idol, <i>Zanclus cornutus</i> (Gaafu Dhaalu)	Zanclidae	Z
3654a	Margin	LR: Threespot Angelfish, <i>Apolemichthys trimaculatus</i> (Gnaviyani)	Pomacentridae	Z
3655a	Margin	LR: Indian Ocean Oriental Sweetlips, <i>Plectorhinchus vittatus</i> (Haa Alifu)	Haemulidae	Z
3656a	SS 10r	U/I Sharks (Haa Dhaalu)		U A
	Margin	LR: Spotted Eagle Ray, <i>Aetobatus narinari</i>	Myliobatidae	Z
3657a	Margin	LR: Whitetip Reef Shark, <i>Triaenodon obesus</i> (Kaafu)	Carcharhinidae	Z
3658a	Margin	LR: Bridled Parrotfish, <i>Scarus frenatus</i> (Laamu)	Scaridae	Z
3659a	Margin	LR: Indian Sail-Fin Surgeonfish, <i>Zebrasoma desjardini</i> (Lhaviyani)	Acanthuridae	Z
3660a	Margin	LR: Turkey Moray, <i>Gymnothorax meleagris</i> (Meemu)	Muraenidae	Z
3661a	Margin	LR: Steephead Parrotfish, <i>Chlorurus strongylocephalus</i> (Noonu)	Scaridae	Z
3662a	Margin	LR: Regal Angelfish, <i>Pygoplites diacanthus</i> (Raa)	Pomacentridae	Z
3663a	Margin	LR: Arc-eye Hawkfish, <i>Paracirrhites arcatus</i> (Seenu)	Cirrhitidae	Z
3664a	Margin	LR: Giant Trevally, <i>Caranx ignobilis</i> (Shaviyani)	Carangidae	Z
3665a	Margin	LR: Dogtooth Tuna, <i>Gymnosarda unicolor</i> (Thaa)	Scombridae	Z
3666a	Margin	LR: Bluelashed Butterflyfish, <i>Chaetodon bennetti</i> (Vaavu)	Chaetodontidae	Z

2016 July 20 (Birds of Prey) (MS/4 & SS/1)

3689b	20r	U/I fish (in Osprey's talons)		U C
3699	SS 60r	U/I fish (in Western Marsh Harrier's talons)		U C

2016 July 20 (Fish) (MS/4 & SS/1)

3694a	22r	Sea Goldie, <i>Pseudanthias squamipinnis</i>	Serranidae	A
3694b	22r	Clown Triggerfish, <i>Balistoides conspicillum</i>	Balistidae	A
3694c	22r	White-banded Triggerfish, <i>Rhinecanthus aculeatus</i>	Balistidae	A
3694d	22r	Titan Triggerfish, <i>Balistoides viridescens</i>	Balistidae	A
3704	SS 70r	Regal Angelfish, <i>Pygoplites diacanthus</i>	Pomacentridae	A
	Margin	ML: Indian Ocean Oriental Sweetlips, <i>Plectorhinchus vittatus</i>	Haemulidae	Z
		LL: Splendid Garden Eel, <i>Gorgasia preclara</i>	Congridae	Z
		Bot: Scalloped Hammerhead, <i>Sphyrna lewini</i>	Sphyrnidae	Z
		LR: Common Bluestripe Snapper, <i>Lutjanus kasmira</i>	Lutjanidae	Z
		MR: Blacktip Soldierfish, <i>Myripristis botche</i> (Cap: <i>M. melanostictus</i>)	Holocentridae	Z

2016 July 20 (Endangered Species) (SS/1)

3701	SS 60r	Humphead Wrasse, <i>Cheilinus undulates</i>	Labridae	A
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2016 October 17 (Underwater Life) (MS/10)

3767a	5r	Whale Shark, <i>Rhincodon typus</i> (w/ divers)	Rhincodontidae	B
3767b	5r	Sergeant-major, <i>Abudefduf saxatilis</i>	Pomacentridae	B
		Melon (Red-fin) Butterflyfish (?), <i>Chaetodon trifasciatus</i>	Chaetodontidae	U B
		U/I reef fish		U C
3767c	5r	Twoband Anemonefish, <i>Amphiprion bicinctus</i>	Pomacentridae	B
3767d	5r	Giant Manta, <i>Mobula birostris</i>	Myliobatidae	A
3767e	5r	Yellow Tang, <i>Zebrasoma flavescens</i> (cleaning sea turtle)	Acanthuridae	B
		U/I reef fish		U C
3767f	5r	U/I Eel	Congridae	U A
3767i	5r	Spotted Eagle Ray, <i>Aetobatus narinari</i>	Myliobatidae	A
3767	Margin	L: Clown anemonefish, <i>Amphiprion ocellaris</i>	Pomacentridae	Z

2016 October 17 (Wildlife) (Set/3)

3770	15r	Whale Shark, <i>Rhincodon typus</i>	Rhincodontidae	A
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MALDIVE ISLANDS (continued) 2016 November 17 (Marine Life of the Maldives) (MS/4) (SS/1)

These ten MS/4 all have the same design in the margin that includes stylized fish. Each of the ten accompanying SS/1 have differing marginal designs depicting various species of sea life including fishes and stylized fishes.

3772	Margin	Stylized fish (w/ dolphins)		S Z
3782	SS 60r	Bot: Stylized fish (w/ dolphins)		S Z
3773a	20r	Reef Manta Ray, <i>Mobula alfredi</i> (two)	Myliobatidae	A
3773b	20r	L: Giant Manta, <i>Mobula birostris</i> (underside)	Myliobatidae	B
		R: Reef Manta Ray, <i>Mobula alfredi</i>	Myliobatidae	B
3773c	20r	Giant Manta, <i>Mobula birostris</i> (two)	Myliobatidae	A
3773d	20r	L: Giant Manta, <i>Mobula birostris</i>	Myliobatidae	B
		R: Reef Manta Ray, <i>Mobula alfredi</i> (underside)	Myliobatidae	B
3773	Margin	Stylized fish (w/ manta rays)		S Z
3783	SS 60r	Reef Manta Ray, <i>Mobula alfredi</i>	Myliobatidae	A
	Margin	Top: Reef Manta Ray, <i>Mobula alfredi</i>	Myliobatidae	Z
		Bot: Stylized fish (w/ manta rays)		S Z
3774a	20r	Geometric Moray, <i>Gymnothorax griseus</i> (Cap: <i>Siderea grisea</i>)	Muraenidae	A
3774b	20r	Undulated Moray, <i>Gymnothorax undulatus</i>	Muraenidae	A
3774c	20r	Laced Moray, <i>Gymnothorax favagineus</i>	Muraenidae	A
3774d	20r	Blackcheek Moray, <i>Gymnothorax breedeni</i>	Muraenidae	A
3774	Margin	Stylized fish (w/ moray eels)		S Z
3784	SS 60r	Giant Moray, <i>Gymnothorax javanicus</i>	Muraenidae	A
	Margin	LL & UR: Giant Moray, <i>Gymnothorax javanicus</i>	Muraenidae	Z
		ML: Red-toothed Triggerfish, <i>Odonus niger</i>	Balistidae	Z
		Bot: Stylized fish (w/ moray eels)		S Z
3775a	20r	Sunburst Butterflyfish, <i>Chaetodon kleinii</i>	Chaetodontidae	A
3775b	20r	Saddle Butterflyfish, <i>Chaetodon ephippium</i>	Chaetodontidae	A
3775c	20r	Redtail Butterflyfish, <i>Chaetodon collare</i> (two)	Chaetodontidae	A
3775d	20r	Speckled Butterflyfish, <i>Chaetodon citrinellus</i>	Chaetodontidae	A
3775	Margin	Stylized fish (w/ butterflyfish)		S Z
3785	SS 60r	Indian Butterflyfish, <i>Chaetodon mitratus</i>	Chaetodontidae	A
	Margin	UR: Triangle Butterflyfish, <i>Chaetodon triangulum</i> (two)	Chaetodontidae	Z
		LL: Bluelashed Butterflyfish, <i>Chaetodon bennetti</i>	Chaetodontidae	Z
		UL & Bot: Threadfin Butterflyfish, <i>Chaetodon auriga</i> (two)	Chaetodontidae	Z
		Ctr: U/I yellow butterflyfish (seven)	Chaetodontidae	U Z
		Bot: Stylized fish (w/ butterflyfish)		S Z
3776	Margin	Stylized fish (w/ corals)		S Z
3786	SS 60r	Bot: Stylized fish (w/ corals)		S Z
3777	Margin	Stylized fish (w/ whales)		S Z
3787	SS 70r	Bot: Stylized fish (w/ whales)		S Z
3778a	22r	Oceanic Whitetip Shark, <i>Carcharhinus longimanus</i> (facing L)	Carcharhinidae	A
3778b	22r	Great Hammerhead Shark, <i>Sphyrna mokarran</i>	Sphyrnidae	A
3778c	22r	Tiger Shark, <i>Galeocerdo cuvier</i> (two)	Carcharhinidae	A
3778d	22r	Oceanic Whitetip Shark, <i>Carcharhinus longimanus</i> (two)	Carcharhinidae	A
3778	Margin	Stylized fish (w/ sharks)		S Z
3788	SS 70r	Tiger Shark, <i>Galeocerdo cuvier</i>	Carcharhinidae	A
	Margin	MR: Tiger Shark, <i>Galeocerdo cuvier</i>	Carcharhinidae	Z
		UL: Great Hammerhead Shark, <i>Sphyrna mokarran</i>	Sphyrnidae	Z
		Bot: Stylized fish (w/ sharks)		S Z
3779a	22r	Wedge-tail Triggerfish, <i>Rhinecanthus rectangulus</i>	Balistidae	A
3779b	22r	Orange-lined Triggerfish, <i>Balistapus undulatus</i>	Balistidae	A
3779c	22r	Gilded Triggerfish, <i>Xanthichthys auromarginatus</i>	Balistidae	A
3779d	22r	Clown Triggerfish, <i>Balistoides conspicillum</i>	Balistidae	A

MALDIVE ISLANDS (continued)

3779	Margin	Stylized fish (w/ triggerfish)		S Z
3789	SS 70r	White-banded Triggerfish, <i>Rhinecanthus aculeatus</i>	Balistidae	A
	Margin	UR: Clown Triggerfish, <i>Balistoides conspicillum</i>	Balistidae	Z
		ML: Yellowmargin Triggerfish, <i>Pseudobalistes flavimarginatus</i>	Balistidae	Z
		LL: Titan Triggerfish, <i>Balistoides viridescens</i>	Balistidae	Z
		Bot: Stylized fish (w/ triggerfish)		S Z
3780a	22r	Southern Bluefin Tuna, <i>Thunnus maccoyii</i>	Scombridae	A
3780b	22r	Atlantic Bluefin Tuna, <i>Thunnus thynnus</i>	Scombridae	A
3780c	22r	Skipjack Tuna, <i>Katsuwonus pelamis</i>	Scombridae	A
3780d	22r	Yellowfin Tuna, <i>Thunnus albacares</i>	Scombridae	A
3780	Margin	Stylized fish (w/ tuna)		S Z
3790	SS 70r	Albacore, <i>Thunnus alalunga</i>	Scombridae	A
		(Top, ML, LL) Albacore, <i>Thunnus alalunga</i>	Scombridae	Z
		Bot: Stylized fish (w/ tuna)		S Z
3781	Margin	Stylized fish (w/ sea turtles)		S Z
3791	SS 70r	Bot: Stylized fish (w/ sea turtles)		S Z

2016 December 26 (Fisherman's Day) (MS/4)

3793a	15r	U/I bait fish (about to be chummed)		U B
3793b	15r	U/I bait fish (in net)		U B

2016 December 28 (Characters from *Finding Dory*) (Block/6)

3794a	20r	Blue Tang, <i>Paracanthurus hepatus</i> (Dory)	Acanthuridae	S
3794b	20r	Clown Anemonefish, <i>Amphiprion ocellaris</i> (Marlin)	Pomacentridae	S
3794c	20r	Clown Anemonefish, <i>Amphiprion ocellaris</i> (Nemo)	Pomacentridae	S
3794f	20r	Whale Shark, <i>Rhincodon typus</i> (Destiny)	Rhincodontidae	S

MEXICO**2018 December 7** (Caldo de Piedra Stone Soup) (Horiz Pair)

3129	7p	Stylized fish (w/ cook)		S C
3130	7p	Stylized fish (w/ soup bowl)		S C

MONTSERRAT**2018 October 10** (Fishing in Montserrat) (MS/3 & SS/1)

1416b	\$6	Northern Red Snapper, <i>Lutjanus campechanus</i>	Lutjanidae	A
1416	Margin	Bkgrd: U/I reef fish		U Z
1417	SS \$10	Bkgrd: U/I reef fish		U Z

MOROCCO**2015 June 9** (Marine Life) (Bklt/10)

1205a	9d	Gilthead Seabream, <i>Sparus aurata</i>	Sparidae	A
1205b	9d	Saddled Seabream, <i>Oblada melanura</i>	Sparidae	A
1205c	9d	Atlantic Bonito, <i>Sarda sarda</i>	Scombridae	A
1205d	9d	Parrotfish, <i>Sparisoma cretense</i>	Sparidae	A
1205e	9d	Swordfish, <i>Xiphias gladius</i>	Xiphiidae	A
1205g	9d	Shortfin Mako Shark, <i>Isurus oxyrinchus</i>	Lamnidae	A
1205h	9d	Sardine (European Pilchard), <i>Sardina pilchardus</i>	Clupeidae	A

2016 September 22 (Seabream) (Single)

1224	3.75d	Redbanded Seabream, <i>Pagrus auriga</i>	Sparidae	A
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2017 January 25 (Shark) (Single)

1228	3.75d	Blue Shark, <i>Prionace glauca</i>	Carcharhinidae	A
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NETHERLANDS**2018 July 23** (Dutch Guilder Currency) (MS/10)

1573j	€1	Three-spined Stickleback, <i>Gasterosteus aculeatus</i> (perf 13¼×12¾)	Gasterosteidae	C
1573t	€1	Three-spined Stickleback, <i>Gasterosteus aculeatus</i> (perf 14¼×14½)	Gasterosteidae	C
1573y		Bklt/2 (Sc#1573s-t)		

NORWAY		2019 January 4 (Oslo European Green Capital) (Coil Single)		
1864	23k	Stylized fish		S C
PALAU		2018 June 26 (Marine Life Preservation) (MS/2)		
1381a	\$1.50	Blacktip Reef Shark, <i>Carcharhinus melanopterus</i>	Carcharhinidae	A
1381	Margin	Bkgrd: U/I reef fish		C Z
PANAMA		2017 October 23 (Gran Coclé Archaeological Artifacts) (Set/3 & SS/2)		
982	20c	Seahorse-shaped pendant	Syngnathidae	A X
985a	SS 75c	Seahorse-shaped pendant (w/ frame line)	Syngnathidae	A X
UNITED STATES		2017 March 29 (Coral Reefs) (Strip/4 & Coil Strip/4)		
5363	(35c)	French Angelfish, <i>Pomacanthus paru</i> (w/ Elkhorn Coral)	Pomacentridae	S B
5364	(35c)	Spotted Moray Eel, <i>Gymnothorax moringa</i> (w/ Brain Coral)	Muraenidae	S B
5365	(35c)	Coney Grouper (Coney), <i>Cephalopholis fulva</i> (w/ Pillar Coral)	Serranidae	S B
		Neon Goby, <i>Elacatinus oceanops</i>	Gobiidae	S B
5366	(35c)	Blue-striped Grunt, <i>Haemulon sciurus</i> (w/ Staghorn Coral)	Haemulidae	S B
5366a		Horiz or Vert Strip/4 (Sc#5363–66) (die cut 11¼×10¾)		
5367	(35c)	Coney Grouper (Coney), <i>Cephalopholis fulva</i> (w/ Pillar Coral)	Serranidae	S B
		Neon Goby, <i>Elacatinus oceanops</i>	Gobiidae	S B
5368	(35c)	Blue-striped Grunt, <i>Haemulon sciurus</i> (w/ Staghorn Coral)	Haemulidae	S B
5369	(35c)	French Angelfish, <i>Pomacanthus paru</i> (w/ Elkhorn Coral)	Pomacentridae	S B
5370	(35c)	Spotted Moray Eel, <i>Gymnothorax moringa</i> (w/ Brain Coral)	Muraenidae	S B
5370a		Horiz Strip/4 (Sc#5367–70) (die cut 9½ vert) (coil)		

BELARUS AQUATIC FAUNA

On 17 April 2019, Belarus issued a set of four and MS/4 colorful stamps depicting a wide variety of aquatic animals.

The “A” (42k) stamp has a Great Diving Beetle (*Dytiscus marginalis*). It is native to Europe and northern Asia. This large insect can grow to a length of 1.1–1.4 in (27–35 mm).

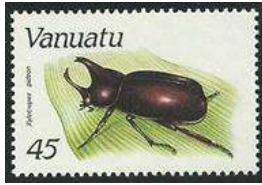
The “N” (1.02r) stamp shows a pair of Three-spined Sticklebacks (*Gasterosteus aculeatus*). This fish is native to most inland coastal waters north of 30°N. It shows great morphological variation throughout its range, which makes it a prime subject for scientific study of evolution.

The “M” (1.38r) stamp shows a Danube Crayfish (*Astacus leptodactylus*). It can grow to a length of 12 in (30 cm), but more commonly it is half that size.

The “H” (1.50r) stamp shows a Lister’s River Snail (*Viviparus contectus*). Its distribution is palaeartic, specifically Europe and western Siberia. The large fresh water snail lives in slow flowing rivers and canals that are unpolluted.

The stamps were designed by Marina Vitkovskaya based on art by Alexander Mityanin.





ENTOMOLOGY

Editor

Donald P. Wright, Jr., BU243
and José Reis, BU1889



New Listings

Scott#	Denom	Common Name/Scientific Name	Family/Subfamily	Code
BOTSWANA				
2019 February 20 (Insects of Botswana) (Set/6)				
N/A	50t	Armored Ground Cricket, <i>Acanthopplus discoidalis</i> Walker	TET, Heterodinae	A
N/A	1p	Tiger Beetle, <i>Manticora</i> sp.	CAR, Cicindelinae	U A
N/A	2p	Saw-backed Locust, <i>Hoplolopha</i> sp.	PAM, Porthetinae	U A
N/A	5p	Robber Fly, <i>Daspletis</i> sp.	ASI, Stenopogoninae	U A
N/A	7p	Hook-Tailed Antlion, <i>Palparidius concinnus</i> Péringuey	MYR, Palparinae	A
N/A	10p	Yellow Pansy, <i>Junonia hierta</i> Fabr.	NYM, Nymphalinae	A
CHINA (Taiwan)				
2018 October 31 (Taichung World Flora Expo) (SS/3)				
4446	Margin	MR: Stylized Butterfly	Lepidoptera	S Z
		LR: U/I Beetle	Coleoptera	U Z
		LR: <i>Bombus</i> sp.	API, Apinae	U Z
CUBA				
2018 November 4 (XV Philatelic Congress: Endemic Birds) (Set/6)				
N/A	65c	<i>Apis mellifera</i> L. (in bird's beak)	API, Apinae	C
GREAT BRITAIN (Isle of Man)				
2019 February 12 (Wildlife) (Block/10 & Vert Strip/10)				
b	(52p)	Common Blue, <i>Polyommatus icarus</i> Rottemburg	LYC, Polyommatinae	A
i	(£1.40)	Scarce Crimson & Gold, <i>Pyrausta sanguinalis</i> L.	CRAM, Pyraustinae	A
N/A		Block/10 (#a-j) (perf 14)		
b	52p	Common Blue, <i>Polyommatus icarus</i> Rottemburg	LYC, Polyommatinae	A
i	52p	Scarce Crimson & Gold, <i>Pyrausta sanguinalis</i> L.	CRAM, Pyraustinae	A
N/A		Vert Strip/10 (#a-j) (die cut) (s/a)		
GUYANA				
2018 November 20 (Tanagers) (MS/6)				
4587	Margin	ML: King Swallowtail, <i>Papilio thoas</i> L.	PAP, Papilioninae	Z
HONG KONG				
2018 October 9 (Cantonese Opera Scenes) (Set/6)				
1963	\$4.90	Actor dressed as butterfly (scene from <i>Butterfly Lovers</i> opera)	Lepidoptera	S
LATVIA				
2019 February 15 (Exhibits in Latvian Museum of Nature) (Single)				
N/A	€1.57	Noble Chafer, <i>Gnorimus nobilis</i> L.	SCA, Cetoniinae	A
LIBERIA				
2019 March 29 (Amazing Insects) (4ea MS/3)				
a	\$300	Giant African Fruit Beetle, <i>Mecynorhina polyphemus</i> Fabr.	SCA, Cetoniinae	A
b	\$300	Derby's Flower Beetle, <i>Dicronorhina derbyana</i> Westwood	SCA, Cetoniinae	A
c	\$300	Giant Goliath Beetle, <i>Goliathus goliatus</i> Drury	SCA, Cetoniinae	A
	Margin	Top: Derby's Flower Beetle, <i>Dicronorhina derbyana</i> Westwood	SCA, Cetoniinae	Z
a	\$200	Giant African Mantis, <i>Sphodromantis viridis</i> Forsskål	MAN, Mantinae	A
b	\$300	Giant African Mantis, <i>Sphodromantis viridis</i> Forsskål	MAN, Mantinae	A
c	\$400	Giant African Mantis, <i>Sphodromantis viridis</i> Forsskål	MAN, Mantinae	A
	Margin	Top: Giant African Mantis, <i>Sphodromantis viridis</i> Forsskål	MAN, Mantinae	Z
a	\$300	<i>Scarabaeus satyrus</i> Boheman (blue carapace)	SCA, Scarabaeinae	A
b	\$300	Same species (black carapace)	SCA, Scarabaeinae	A
c	\$300	Same species (purple carapace)	SCA, Scarabaeinae	A
	Margin	Top: <i>Scarabaeus satyrus</i> Boheman (w/ dung ball)	SCA, Scarabaeinae	A

LIBERIA (continued)

a	\$250	Rainbow Bush Locust, <i>Phymateus saxosus</i> Coquerel	PYRG, Pyrgomorphinae	A
b	\$300	Migratory Locust, <i>Locusta migratoria</i> ssp. <i>migratorioides</i> Reich & Fairmaire	ACR, Oedipodinae	A
c	\$350	Milkweed Grasshopper, <i>Phymateus morbillosus</i> L.	PYRG, Pyrgomorphinae	A
Margin		Top: Rainbow Bush Locust, <i>Phymateus saxosus</i> Coquerel	PYRG, Pyrgomorphinae	Z

MALAWI**2019 February 5** (Malawi Insects) (MS/6 & 6ea SS/1) (inscr. 2018)

a	700k	<i>Polistes</i> sp.	VES, Polistinae	U A
b	700k	Seven-Spotted Ladybird, <i>Coccinella septempunctata</i> L.	COC, Coccinellinae	A
c	700k	Blue Monarch, <i>Tirumala limniace</i> Cramer	NYM, Danainae	A
d	700k	Praying Mantis, <i>Sphodromantis</i> sp.	MAN, Mantinae	U A
e	700k	Garden Locust, <i>Acanthacris ruficornis</i> Fabr.	ACR, Cyrtacanthacridinae	A
f	700k	Western Honeybee, <i>Apis mellifera</i> L.	API, Apinae	A
Margin		UR: U/I Ant	Formicidae	U Z
N/A	SS 450k	Elegant Grasshopper, <i>Zonocerus elegans</i> Thunberg	PYRG, Pyrgomorphinae	A
N/A	SS 450k	Western Honeybee, <i>Apis mellifera</i> L.	API, Apinae	A
N/A	SS 450k	U/I Grasshopper	Acrididae	U A
N/A	SS 450k	Eastern Subterranean Termite, <i>Reticulitermes flavipes</i> Kollar	Rhinotermitidae, Heterotermitinae	A
N/A	SS 450k	Big-Headed Ant, <i>Pheidole megacephala</i> Fabr.	FOR, Myrmicinae	A
N/A	SS 450k	Yellow & Black Potter Wasp, <i>Delta campaniforme</i> Fabr.	EUM, Eumeninae	A

Although these stamps are captioned "Malawi Insects," the Termite, Ladybird, and Blue Monarch are not found in Central Africa.

MALAYSIA**2019 February 19** (Exotic Food) (Set/3 & SS/1)

N/A	60s	Javanese Grasshopper, <i>Valanga nigricornis</i> Burmeister (fried grasshoppers)	ACR, Cyrtacanthacridinae	A
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MOLDOVA**2019** (Honeybees) (MS/12)

There is a question about the validity and source of this issue.

a	1.751	European Honeybee, <i>Apis mellifera</i> ssp. <i>mellifera</i> L.	API, Apinae	A
b	1.751	German Black Honeybee, <i>A. mellifera</i> ssp. <i>mellifera</i> L.	API, Apinae	A
c	1.751	Carniolan Honeybee, <i>A. mellifera</i> ssp. <i>carnica</i> Pollman	API, Apinae	A
d	1.751	Buckfast Honeybee, <i>A. mellifera</i> L. (hybrid)	API, Apinae	A
e	1.751	African Honeybee, <i>A. mellifera</i> ssp. <i>scutellata</i> Lepeletier	API, Apinae	A
f	1.751	Italian Honeybee, <i>A. mellifera</i> ssp. <i>ligustica</i> Spinola	API, Apinae	A
g	1.751	Russian Honeybee, <i>A. mellifera</i> L. (strain)	API, Apinae	A
h	1.751	Carpathian Honeybee, <i>A. m.</i> ssp. <i>carnica</i> Pollman (ecotype)	API, Apinae	A
i	1.751	Gray Caucasian Honeybee, <i>A. m.</i> ssp. <i>caucasica</i> Gorbachev	API, Apinae	A
j	1.751	Yellow Caucasian Honeybee, <i>A. m.</i> ssp. <i>caucasica</i> Gorbachev	API, Apinae	A
k	1.751	Asiatic Honeybee, <i>Apis cerana</i> Enderlein	API, Apinae	A
l	1.751	Cordovan Honeybee, <i>A. m.</i> ssp. <i>ligustica</i> Spinola (race)	API, Apinae	A

ROMANIA**2016 March 23** (Easter) (SS/3)

Mi7055	11	Western Honeybee, <i>Apis mellifera</i> L. (w/ tulips)	API, Apinae	C
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Beyond the Catalog

(Issues of dubious validity)

CENTRAL AFRICA**2019 March 12** (Caterpillars) (Single) (CALC190108a)

N/A	1000fr	Mopane Worm, <i>Gonimbrasia belina</i> Westwood (larvae)	SAT, Saturniinae	A
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DJIBOUTI**2018 December 13** (Global Warming) (MS/4) (DJB18603a)

c	240fr	Brown Bumblebee, <i>Bombus pascuorum</i> Scopoli	API, Apinae	A
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MOZAMBIQUE		2019 February 10 (Butterflies) (MS/4 & SS/1) (MOZ190113a&b)		
a	116m	Small Blue Grecian, <i>Heliconius sara</i> Fabr.	NYM, Heliconiinae	A
b	116m	Goliath Birdwing, <i>Troides goliath</i> Oberthür	PAP, Papilioninae	A
c	116m	Numata Longwing, <i>Heliconius numata</i> ssp. <i>aurora</i> Bates	NYM, Heliconiinae	A
d	116m	Peacock, <i>Nymphalis io</i> L.	NYM, Nymphalinae	A
	SS 300m	Banded Peacock, <i>Papilio palinurus</i> Fabr.	PAP, Papilioninae	A
	Margin	R: Uranus Giant Owl, <i>Caligo uranus</i> Herrich-Schaeffer	NYM, Morphinae	Z
ST. THOMAS & PRINCE IS		2019 February 4 (Butterflies) (MS/4 & SS/1) (ST190108a&b)		
a	31d	White Peacock, <i>Anartia jatrophae</i> Johansson	NYM, Nymphalinae	A
b	31d	Pipevine Swallowtail, <i>Battus philenor</i> L.	PAP, Papilioninae	A
c	31d	Giant Swallowtail, <i>Papilio cresphontes</i> Cramer	PAP, Papilioninae	A
d	31d	American Painted Lady, <i>Vanessa virginiensis</i> Drury	NYM, Nymphalinae	A
	Margin	Top: Brimstone, <i>Gonepteryx rhamni</i> L.	PIE, Coliadinae	Z
	SS 124d	Bluewing, <i>Myscelia ethusa</i> Doyere	NYM, Biblidinae	A
	Margin	R: Malachite, <i>Siproeta stelenes</i> L.	NYM, Nymphalinae	Z
SIERRA LEONE		2019 January 30 (Bees) (MS/4 & SS/1) (SRL190106a&b)		
a	12500le	Red Mason Bee, <i>Osmia bicornis</i> L.	MEGA, Megachilinae	A
b	12500le	Tawny Mining Bee, <i>Andrena fulva</i> Mueller	AND, Andreninae	A
c	12500le	Violet Carpenter Bee, <i>Xylocopa valga</i> Gerstaecker	API, Xylocopinae	A
d	12500le	Buff-Tailed Bumblebee, <i>Bombus terrestris</i> L.	API, Apinae	A
	SS 50000le	Violet Carpenter bee, <i>Xylocopa violacea</i> L.	API, Xylocopinae	A
	Margin	R: Western Honeybee, <i>Apis mellifera</i> L.	API, Apinae	Z
TOGO		2019 February 25 (Butterflies) (2ea MS/4) (TG190106a & 190107a)		
a	800fr	<i>Cepora aspasia</i> Stoll	PIE, Pierinae	A
b	800fr	Blue Morpho, <i>Morpho rhetenor</i> ssp. <i>cacica</i> Staudinger	NYM, Morphinae	A
c	800fr	Scarlet Mormon, <i>Papilio deiphobus</i> ssp. <i>rumanzovia</i> Eschscholtz	PAP, Papilioninae	A
d	800fr	Italian Marbled White, <i>Melanargia arge</i> Sulzer	NYM, Satyrinae	A
	Margin	UL: Pink-Tipped Satyr, <i>Cithaerias pireta</i> ssp. <i>aurorina</i> Weymer	NYM, Satyrinae	Z
		L-UR: U/I Butterfly	Nymphalidae	U Z
		Mid-UR: African Monarch, <i>Danaus chrysippus</i> L.	NYM, Danainae	Z
		R-UR: Small Copper, <i>Lycaena phlaeas</i> L.	LYC, Lycaeninae	Z
a	800fr	Large Copper, <i>Lycaena dispar</i> Haworth	LYC, Lycaeninae	A
b	800fr	Checkered Swallowtail, <i>Papilio demoleus</i> L.	PAP, Papilioninae	A
c	800fr	Amazon Beauty, <i>Baeotus aeilus</i> Stoll	NYM, Nymphalinae	A
d	800fr	Blue Morpho, <i>Morpho rhetenor</i> Cramer	NYM, Morphinae	A
	Margin	UL: Pink-Tipped Satyr, <i>Cithaerias pireta</i> ssp. <i>aurorina</i> Weymer	NYM, Satyrinae	Z
		L-UR: U/I Butterfly	Nymphalidae	U Z
		Mid-UR: African Monarch, <i>Danaus chrysippus</i> L.	NYM, Danainae	Z
		R-UR: Small Copper, <i>Lycaena phlaeas</i> L.	LYC, Lycaeninae	Z

Fun Facts

Which insects have appeared on 150 or more different stamps?

731	Western Honeybee, <i>Apis mellifera</i> L.
353	Monarch, <i>Danaus plexippus</i> L.
267	Old World Swallowtail, <i>Papilio machaon</i> L.
184	African Monarch, <i>Danaus chrysippus</i> L.
167	Peacock, <i>Nymphalis io</i> L.
164	Seven-Spotted Ladybird, <i>Coccinella septempunctata</i> L.
152	Painted Lady, <i>Vanessa cardui</i> L.
150	Red Admiral, <i>Vanessa atalanta</i> L.

Thirty-seven species have appeared more than 50 times on stamps, with all being Lepidoptera except for a honeybee, stag beetle, ladybird, and mosquito. Species listed also include subspecies. Of the 37 species, 78 percent were described by Linnaeus, indicating stamp designers and postal authorities favor common, well-known species. Meanwhile, entomo-philatelists groan “Not those again.”



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PALEONTOLOGY

Editor

Michael Kogan, BU1863

New Listings



Scott#	Denom	Common Name/Scientific Name	Family	Code
ARMENIA 2019 March 27 (Flora & Fauna of Ancient Time III) (Single)				
N/A	230d	†Steppe Mammoth, <i>Mammuthus trogontherii</i>	Elephantidae	A
CENTRAL AFRICAN REPUBLIC 2019 January 16 (Dinosaurs) (MS/4 & SS/1) ^[1]				
a	850fr	<i>Centrosaurus apertus</i>	†Ceratopsidae	A
b	850fr	<i>Lambeosaurus lambei</i>	†Hadrosauridae	A
c	850fr	<i>Citipati osmolskae</i>	†Oviraptoridae	A
d	850fr	<i>Giganotosaurus carolinii</i>	†Carcharodontosauridae	A
N/A	SS 3300fr	<i>Velociraptor mongoliensis</i>	†Dromaeosauridae	A
	Margin	R: <i>Giganotosaurus carolinii</i>	†Carcharodontosauridae	Z
GUINEA 2019 April 22 (Dinosaurs) (Set/4) ^[1]				
Each of these stamps was also issued in SS/1 with two of the other species shown in the bottom margin.				
N/A	12500fr	<i>Parasaurolophus walkeri</i>	†Hadrosauridae	A
N/A	12500fr	<i>Spinosaurus aegyptiacus</i>	†Spinosauridae	A
N/A	12500fr	† <i>Cryolophosaurus ellioti</i>	Clade: Tetanurae	A
N/A	12500fr	<i>Euoplocephalus tutus</i>	†Ankylosauridae	A
MOZAMBIQUE 2019 February 10 (Dinosaurs) (MS/4 & SS/1) ^[1]				
a	116m	<i>Nodosaurus textilis</i>	†Nodosauridae	A
b	116m	<i>Giganotosaurus carolinii</i>	†Carcharodontosauridae	A
c	116m	<i>Fukuisaurus tetoriensis</i>	Superfamily: †Hadrosauoidea	A
d	116m	<i>Ankylosaurus magniventris</i>	†Ankylosauridae	A
N/A	SS 300m	<i>Triceratops horridus</i>	†Ceratopsidae	A
	Margin	R: <i>Deinonychus antirrhopus</i>	†Dromaeosauridae	Z
2019 February 10 (Extinct Birds) (MS/4) ^[1]				
d	116m	<i>Archaeopteryx lithographica</i>	†Archaeopterygidae	A
NIGER 2019 February 27 (Dinosaurs) (MS/4 & SS/1) ^[1]				
a	800fr	<i>Bajadasaurus pronuspinax</i>	†Dicraeosauridae	A
b	800fr	<i>Mussaurus patagonicus</i>	†Mussauridae	A
c	800fr	L: <i>Staurikosaurus pricei</i>	†Herrerasauridae	B
		R: <i>Eoraptor lunensis</i>	Suborder: Theropoda	B
d	800fr	<i>Riojasaurus incertus</i>	†Riojasauridae	A
	Margin	UL: <i>Triceratops</i> (skull)	†Ceratopsidae	Z
N/A	SS 3300fr	<i>Sauropelta edwardsorum</i>	†Nodosauridae	A
	Margin	UR: <i>Riojasaurus incertus</i>	†Riojasauridae	Z
		LR: <i>Staurikosaurus pricei</i>	†Herrerasauridae	Z
2019 February 27 (Meteorites) (MS/4 & SS/1) ^[1]				
Illustrates the theory that dinosaurs were killed by an asteroid impact. SS shows Luis & Walter Alvarez.				
	MS Margin	Top: U/I Pterosaurs	Order: †Pterosauria	Z
	SS Margin	Top: U/I Dinosaurs & Pterosaurs		Z

PORTUGAL**2019 April 5** (Museums) (Set/13)

N/A	20g	Jurassic Ammonite (Geological Museum of Lisbon)	Subclass: †Ammonoidea	B
N/A	20g	Natural History Museum of Lisbon		R
N/A	20g	Science Museum of the University of Coimbra		R

ST. THOMAS & PRINCE**2019 February 4** (Dinosaurs) (MS/4 & SS/1)^[1]

a	31d	<i>Agustinia ligabuei</i>	†Agustiniidae	A
b	31d	<i>Einosaurus procurvicornis</i>	†Ceratopsidae	A
c	31d	<i>Citipati osmolskae</i>	†Oviraptoridae	A
d	31d	<i>Brachylophosaurus canadensis</i>	†Hadrosauridae	A
	Margin	Top: <i>Tyrannosaurus</i>	†Tyrannosauridae	Z
N/A	SS 124d	<i>Majungasaurus crenatissimus</i>	†Abelisauridae	A
	Margin	Bot: <i>Tyrannosaurus rex</i>	†Tyrannosauridae	Z

SLOVENIA**2019 March 22** (Fossil Mammals in Slovenia) (Single)

N/A	85c	<i>Anthracotherium magnum</i>	†Anthracotheriidae	A
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TOGO**2019 February 25** (Dinosaurs) (2ea MS/4)^[1]

a	800fr	<i>Stegosaurus stenops</i>	†Stegosauridae	A
b	800fr	<i>Pterodactylus antiquus</i>	Clade: †Pterodactylidae	A
c	800fr	<i>Spinosaurus aegyptiacus</i>	†Spinosauridae	A
d	800fr	<i>Parasaurolophus walkeri</i>	†Hadrosauridae	A
	Margin	Top: <i>Pterodactylus antiquus</i>	Clade: †Pterodactylidae	Z
a	800fr	<i>Tyrannosaurus rex</i>	†Tyrannosauridae	A
b	800fr	<i>Triceratops horridus</i>	†Ceratopsidae	A
c	800fr	<i>Brachiosaurus altithorax</i>	†Brachiosauridae	A
d	800fr	<i>Ankylosaurus magniventris</i>	†Ankylosauridae	A
	Margin	Top: <i>Stegosaurus stenops</i>	†Stegosauridae	Z

2019 February 25 (Fossils) (MS/4 & SS/1)^[1]

a	800fr	<i>Dicranurus elegans</i> (fossil)	†Odontopleuridae	A
b	800fr	<i>Elrathia kingii</i> (fossil)	†Alokistocaridae	A
c	800fr	<i>Velociraptor mongoliensis</i> (fossil)	†Dromaeosauridae	A
d	800fr	† <i>Mioplosus labracoides</i> (fossil)	Percidae	A
	Margin	UL: <i>Tyrannosaurus rex</i> (skeleton)	†Tyrannosauridae	Z
		UR: † <i>Smilodon</i> (skull)	Felidae	Z
N/A	SS 3300fr	<i>Stegosaurus stenops</i> (fossil)	†Stegosauridae	A
	Margin	LR: <i>Triceratops horridus</i> (skull)	†Ceratopsidae	Z
		UL: <i>Archaeopteryx lithographica</i> (fossil)	†Archaeopterygidae	Z

Other Stamps to Consider**PERU****2019 February 11** (100th anniv. Peru Natural History Museum) (Single)

N/A	\$6	Museum entrance		R
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Personalized Issue**BELGIUM****2019 February** (Neanderthal Fossils)

N/A	1 Europe	Bones of Neanderthals from Spy cave in Belgium, discovered in 1886 (20gr Europe Letter rate)		R
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NETHERLANDS**2019 April 20** (Mammoth)

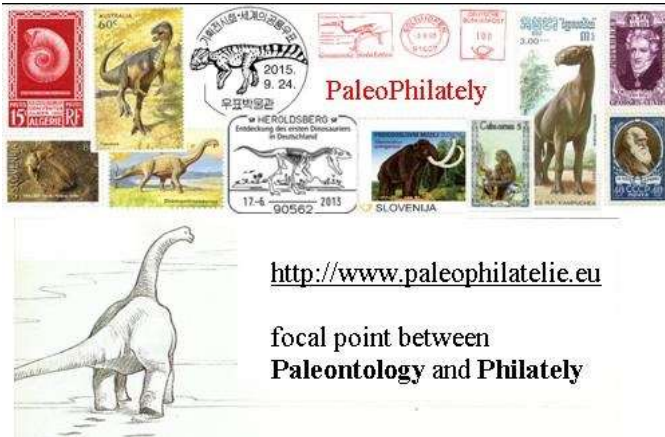
N/A	1	†Mammoth, <i>Mammuthus</i> sp. (three walking) (20gr Domestic Letter rate) (Issued for a stamp show in Gouda, Netherlands.)	Elephantidae	A
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Notes:

[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>.



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Paleontology and Philately

<http://www.paleophilatelie.eu/year/current.html>
list of all new issues

http://www.paleophilatelie.eu/phil_catalogue.html
chronology and country based catalog

http://www.paleophilatelie.eu/stamps_overview.html
gallery of stamps, FDC, circulated covers

Contact: admin@paleophilatelie.eu

Join us on Facebook: PaleoPhilately group

**USA DINOSAUR STAMPS**

On 28 June 2019, the U.S. Postal Service plans to issue a set of four Forever (55c) stamps depicting *Tyrannosaurus rex*, probably the most famous dinosaur species. The die cut self-adhesive stamps will be issued in panes of 16.

One design illustrates a face-to-face encounter with a *T. rex* approaching through a forest clearing. Another shows the fossil skeleton of a young adult *T. rex* with the skeleton a young *Triceratops*.

The third and fourth stamps depict a newly hatched *T. rex* covered with downy feathers and a bare-skinned juvenile *T. rex* chasing a primitive mammal.

Described as “the Nation’s *T. rex*,” the young adult depicted on two of the stamps, was discovered on federal land in Montana and is one of the most studied and important specimens ever found. Its remains will soon be on display at the Smithsonian Institution’s National Museum of Natural History in Washington, D.C.

Art director Greg Breeding designed the stamps with original artwork by Julius T. Csotonyi, a scientist and paleoartist.



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/>

American Topical Association. Topical collecting and exhibiting information, youth activities, checklists.

<http://www.americantopicalassn.org/home.shtml>

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

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

Exploring Stamps. Interesting and professional videos produced by videographer Graham Beck on all sorts of stamp collecting topics.

<https://www.youtube.com/channel/UCkeSM6aOWfaUPIGb5rPOGyA>

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 Institute. 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>

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>

Bug Guide. Identification, images, and information for insects, spiders, and their kin for the United States and Canada.

<https://bugguide.net/node/view/15740>

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

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

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>

Entomology Today. Entomological Society of America site reporting interesting discoveries in insect science, entomological society news and events, and related articles.

<https://entomologytoday.org/>

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/>

Society of the Study of Amphibians and Reptiles. Website devoted to herpetology research and conservation. Database of North American species names.

<https://ssarherps.org/>

Turtle Meter Stamps. Updated website containing a worldwide catalog of meter stamps and meter marks that depict turtles and tortoises based on the owners 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/>

Burke Museum Ichthyology. Database of the museum’s archival collection of more than 11 million specimens.

<http://www.burkemuseum.org/research-and-collections/ichthyology>

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://vertebrates.si.edu/mammals/index.html>

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/>

Paleophilately. 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.paleophilately.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 selvage
Wr*	Head wreath (or chaplet)	*	Subject is natural color (no longer in use)

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
inscr	inscribed	unwmk	un-watermarked
Intl.	International	UPU	Universal Postal Union
L	left position indicator	UR	upper right position indicator
litho	lithography	US	United States
LL	lower left position indicator	USPOD	United States Post Office Department
LR	lower right position indicator	USPS	United States Postal Service
Mi#	Michel Catalog number	var.	variety
mm	millimeter	vert	vertical orientation
MS	miniature sheet	Vol	Volume
ML	middle left position indicator	wmk	watermarked
MR	middle right position indicator	WWF	World Wildlife Federation
N/A	not applicable (or not available)	Yv#	Yvert & Tellier Catalog number
nd	non-denominated	♂	male symbol
NTSS	National Topical Stamp Show	♀	female symbol
NWF	National Wildlife Federation	☠	poisonous/venomous symbol

Entomology Family Abbreviations:

ACR	Acrididae	AES	Aeshnidae	AND	Andrenidae
ANO	Anobiidae	ANT	Anthicidae	API	Apidae
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		