

BIOPHILATELY

OFFICIAL JOURNAL OF THE BIOLOGY UNIT OF ATA

DECEMBER 2018

VOLUME 67, NUMBER 4

Butterflies could not go to the dance ...because it was a mothball.



Vladimir Kachan

Symbolic Butterflies and Moths

More Inside >>



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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 February 2019.

FROM THE EDITOR'S DESK

Our cover provides a chance for a little quiz. Which of the species shown are moths that get to go to the dance, and which are butterflies that will get bounced at the door? See the answer on page 344.

Our final edition for this year includes some bonus material as an early holiday gift for all of our members. We have included an event calendar per member request that shows all of the American Philatelic Society sanctioned World Series of Philately exhibitions for the upcoming year.

We have also included a couple more articles than usual to start implementing some of the suggestions of the jury at the last literature exhibition.

Also the Unit Board of Directors has voted to increase the membership dues for those who receive the print edition of the journal. (See the revised rates in the box below.) The on-line electronic membership dues will remain the same.

The Unit has not increased its dues since 2001, and for the past three years it has been operating at a deficit. Perhaps the government can get away with deficit spending, but since unlike the government, we cannot print our own money, when we run out, we are through. A new membership form is included with the print copy in the mail. A downloadable version is also on the Unit website (www.biophilately.org).

The Secretary is asking **all members** to fill out and return this form whether you are paying your dues now, or not. This includes our Life members. The Secretary needs your updated address and contact information and your indication to grant or withhold your address data in our membership listing. This is very important, so please do not neglect to submit your form. The electronic version of the form is fillable on your computer, so you can fill it out, save it and email a copy to the Secretary to save yourself time and a stamp. (By the way, the new US first -class rate will go up to 55c in January 2019.)

While you are considering the new membership dues, I would like to point out that there are advantages to receiving the web/electronic version besides the lower rate. For one thing, each new edition is immediately available to read as soon as it is published. You need not wait on the mail to deliver your copy. Also, because the sections are separated, you can select and read/download only those you are interested in (though I and our authors would appreciate it if you would take a look at all of the articles).

Since it is the end of the year, what would that be without asking you to consider making a donation to the Unit along with your membership payment. For US residents, such donations are tax-deductible. Each year the Unit gives out three exhibiting awards at the National Topical Stamp Show. These donations help pay for those awards and also help sponsor the publication of handbooks and other materials produced by the ATA.

I neglected to place an index in the last edition of Volume 66 and I have corrected this omission in this edition by including a combined index for Volumes 66 and 67.

I hope everyone has a terrific holiday season and a safe and healthy New Year.

Jack R. Congrove



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

US membership	\$25
Canada membership	\$30
Worldwide membership	\$45
On-line membership	\$15

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

A momentous anniversary took place earlier this month. A hundred years ago the Armistice of WWI was signed at the 11th hour of the 11th day of the 11th month. This ended a hideous war, where more men died from disease and infection than from bullets and mortar shells.

I see a souvenir sheet to honor the end of WWI with a watercolor painting of a red poppy. It symbolizes "Remembrance" of those who sacrificed and paid the ultimate price. "In Flanders field the poppies grow between the crosses row on row...." We think of the sacrifices of those who served so many years ago. And now, as then, we honor those who serve today.

Thanksgiving is here. The weather has turned cold, with wind and snow. I watch the leaves turn red, orange, and gold, then fall to the ground. The flowers have all wilted. The squirrels are running everywhere hiding nuts for later. And yes, the Christmas decorations are up in all the stores.

We are thankful for our families and friends, who help us through the day, and make us better persons. We can also be thankful for our wonderful hobby. It helps us pass the time and learn about the world around us and meet new friends. For the Biology Unit, it helps us appreciate the Natural World, share knowledge and ideas. As we go through the holiday season, Merry Christmas and Happy New Year to all.

Laurie



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SECRETARY-TREASURER'S CORNER

DUES

The Biology Unit Board of Directors has determined to increase the annual membership dues. This topic was discussed at the Unit meeting held at the joint APS-ATA show in Columbus, Ohio, in August.

For each of the past three years, the Unit has been operating at a deficit. As mentioned in the last edition of the journal, and after discussion, the Unit Board of Directors has decided that we must increase the membership dues in order to keep up with our expenses. This will be the first increase in dues since 2001.

The dues for the electronic/website version will remain the same at \$15 per year. The dues for receiving the print edition will increase to \$25 for US subscribers, \$30 for Canadian subscribers, and \$45 for worldwide subscribers.

We have included a Membership Renewal form as a separate page with this edition. Those of you who receive only the electronic version, please go to the Unit website (www.biophilately.org) and download an electronically fillable version of the form. Fill it out and email the completed form to the Secretary (chris-dahle@biophilately.org).

It is important that **everyone** fill out and return this form whether or not you are paying your dues now, or even if you are a Life member. We need the up-to-date address information and your indications for granting permission to publish your contact address information in our public membership listing.

Also, please consider including a donation with your dues payment. These donations are tax-deductible for US members. We use the money from these donations to fund our Biology Unit awards and to help sponsor publication of handbooks written by our Unit members. We also help sponsor functions at the National Topical Stamp Show.

NEW MEMBERS

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

1890	Victor Wasilov, Alpharetta, Georgia	fish (5), insects (7)
1891	Peter Voice, Kalamazoo, Michigan	prehistoric life/dinosaurs (0), minerals, geology
1892	Robert Odum, Milwaukee, Wisconsin	mushrooms (2), birds (5), primates (8)

Vera Felts, the Executive Director of the American Topical Association, when she sends out new member packets for those who join the ATA, includes business cards for study units that relate to the topics they collect. She reports that between 50–60 percent of the cards are for the Biology Unit, more by far than any of the other 50 units.

Check with your local club members at the next meeting to see who collects a biological topic and get them signed up. Membership forms and instructions are on our website (www.biophilately.org/membership.html).

LETTERS

[Ed. note: Excerpts from a letter from Peter Wilson received 18 September 2018.]

“For me, I would gladly pay \$25 or more for a printed copy of *Biophilately*. Two reasons for that: (1) I’m basically a Luddite.... (2) A bigger reason is that it would end up costing me more. I have collections in nearly every category of listings. It is so much easier to get the Scott number in *Biophilately* than digging through back issues of *Scott’s Monthly*....

“The second point that struck me is a bit of disappointment in the level of medal won at NTSS-StampShow. Again, this just my opinion: I’m very happy with *Biophilately* as it is. Frankly, the level of medal should be secondary. I’d hate to see the listings go away. While I enjoy the articles, I [pore] over the listings to add Scott numbers to what I have, and see what I’ve missed.

“You are doing a great job, and I look forward to each issue. Thank you for listening to my opinions.”



NEWS OF NOTE

SPECIAL OFFER

The Maximum Card Study Unit is running a special offer for Biology Unit members who are also ATA members. They will give you a free full year membership in their study unit. All you need to do is contact the President, Terry Watson (terryw7633@comcast.net), and provide your email address. Their journal is published only in an electronic format.

We will be running an article about maximum cards and how they are created in the next edition of *Biophilately*. These items can add a colorful aspect to your topical collection. You can find many that feature biological subjects and you can make some of your own. The upcoming article will teach you how.

ATA PUBLICATIONS WIN AWARD

Auction house Christoph Gaertner in Germany has sponsored a philatelic literature competition each year since 2013. This year, Vera Felts, the Executive Director of the American Topical Association, the parent organization of our study unit, entered *Topical Time*, the ATA magazine, in the regular category and *The Magical World of Stamp Collecting* in the youth category. A few weeks before the award announcement she was asked if it was OK if they combined the two entries into one category, which would receive more points. Of course, she agreed to permit this.



Roger Van Laere (R) accepts First Place award on ATA's behalf from Christoph Gaertner

On 22 October, the awards were announced and the ATA entry received the First Place award. This is no small achievement as the competition involved 22 entries from many countries and many prestigious philatelic organizations. The First Place award comes with an impressive plaque, certificate, and not least, prize money of €2,000.00 (approximately \$2,300.00).

Biology Unit member Roger Van Laere from Belgium, represented the ATA in receiving the award. See the complete listing of awards at the CG website: (www.cg-award.com/2018_de.php).

Congratulations to Wayne Youngblood, *Topical Time* editor, and Aimee Devine, Assistant ATA Youth Coordinator and editor of *The Magical World of Stamp Collecting*.

CHEMISTRY ON STAMPS

One of the newest members of the American Topical Association, Gu-Gang Chang of Taiwan, has created a website focusing on Chemistry on Stamps (<http://www.chemophil.blogspot.tw>). This site has some very interesting information that relates to biophilately including a section on the "Chemistry of Life."

The site contains hundreds of fascinating exhibit pages showing stamps, covers, ephemera, and other wonderful material from his collection relating to chemistry, medicine, biology, and scientists. All of the text and captions are in English.

LONG TIME PHILATELIC PUBLISHER CLOSING

Washington Stamp Exchange of Florham Park, New Jersey, a fixture of the stamp hobby for 85 years, is closing its business at the end of 2018.

The decision was announced in a 19 October press release. The company discontinued its ArtCraft first day cover (FDC) line at the end of 2015, citing decreasing sales and high production costs. The company reported that it intends to sell everything in its stock “at steeply discounted prices,” including FDCs (ArtCraft), albums (White Ace albums and pages) and supplies (StampMount).

The company is offering products through its website (<http://www.washpress.com>).

LABELS PURPORTING TO BE STAMPS

The Collectors Club of Chicago was founded in 1928, and has as its mission “the documentation, preservation, advancement, and promotion of philately through education, study research, and services...” The CCC organized the Arthur Salm Foundation in 1991, in order to conduct technical research on philatelic products, and to report on matters relevant to philatelic forgeries and fantasies. The foundation has issued a series of reports over the years.

The first edition of Salm Paper No. 4, “Labels Purporting to be Stamps,” was issued in May 1997. The document was initiated when CCC member and well-known philatelic writer, Lester E. Winick, received a letter from a collector of topicals, who had purchased hundreds of dollars of stamps representing the fictitious modern-day nations of “Abkhazia,” “Batum,” and “Easdale Island” at stamp shows as prestigious as CAPEX '96. The collector was told by a stamp dealer at the bourse that “...these countries were emerging nations as a splinter off old Russia.” Another collector buying the same issues was told that “...these countries were forerunners, and would be valuable in the future.”

In 2012, Charles E. Cwiakala completely updated and revised the original document, adding a great deal of further or new information. This listing is a valuable reference for identifying bogus issues. You can view this listing on-line at the CCC website (www.collectorsclubchicago.org/label-stamps.php).

REMINDER

In the last issue, I mentioned that some members were unaware of the distinguished history of the Biology Unit. In 2013, we published *The Mother of All Indexes*, which details this history. I would like others to know about our Unit and its contributions and I offered to email an electronic copy of *The Mother of All Indexes* to any Unit member who contacts me before 31 December (jackcongrove@comcast.net). Time is running out on this offer.

TOPICAL COLLECTING VIDEO

In the report on the 2018 National Topical Stamp Show in the last issue, I mentioned that videographer Graham Beck had produced a high quality video report on the show (<https://www.youtube.com/watch?v=5bImEro1G30>). Beck has continued his video presentations and one of his latest is titled *Top 10 Topics*, which he produced in conjunction with the American Topical Association. In this video, he explores the top ten most popular stamp collecting topics as determined by the ATA member submissions for its membership directory.

Three of these top ten topics relate to biophilately. Can you guess what they are, or what topic is Number One? You will have to watch the video to find out (<https://www.youtube.com/watch?v=H64CWAYpA7E>). It is also available for ATA members to download from the ATA “Because You Belong” website so you can use it for a presentation at your local club meeting (www.ata-becauseyoubelong.org). You have to log in to this website.

There are a number of other videos relating to topical stamp collecting. You can find links to them at the ATA website (<http://www.americantopicalassn.org/videos.shtml>). I noticed subjects such as aquariums, cats, chickens, donkeys, elephants, fossils, and more.

DISTINGUISHED TOPICAL PHILATELIST NOMINATIONS

Each year the American Topical Association presents its highest award, the Distinguished Topical Philatelist (DTP) award to a deserving individual. The DTP is awarded for service to topical philately in general and to the ATA in particular. It was established in 1952, and has been presented to more than 120 individuals since its inception. Thirty of these awardees have been members of the Biology Unit—more than any other study unit.

This is the most prestigious award given by the ATA. The DTP Selection Committee is accepting nominations for the 2019 recipient. You can submit your nomination to the chairperson, Jean C. Stout, P.O. Box 8174, Jackson, MS 39298. Please include a description of the individual's philatelic contributions and activities.

EVENT CALENDAR

Event	Dates	Location
Southeastern Stamp Expo	25–27 January 2019	Hilton Atlanta Northeast, Norcross, GA
Sarasota National	1–3 February 2019	Municipal Auditorium, Sarasota, FL
AmeriStamp Expo/ARIPEX	15–17 February 2019	Mesa Convention Center, Mesa, AZ
Garfield-Perry March Party	15–17 March 2019	Holiday Inn Strongsville, Strongsville, OH
St. Louis Stamp Expo	29–31 March 2019	St. Louis Renaissance Airport Hotel, St. Louis, MO
Plymouth Show	13–14 April 2019	Hellenic Cultural Center, Westland, MI
WESTPEX	26–28 April 2019	San Francisco Airport Marriott, Burlingame, CA
Philatelic Show	3–5 May 2019	Boxboro Regency, Boxborough, MA
PIPEX	10–12 May 2019	Red Lion Hotel on the River, Portland, OR
ROPEX	17–18 May 2019	Greater Canandaigua Civic Center, Canandaigua, NY
Rocky Mountain Stamp Show	24–26 May 2019	Crowne Plaza Hotel, Denver, CO
NAPEX	7–9 June 2019	McLean Hilton at Tyson's Corners, McLean, VA
COLOPEX	14-15 June 2019	St. Andrew-Nugent Parish Hall, Columbus, OH
Royal*2019*Royale	21–23 June 2019	Hilton Mississauga, Mississauga, ON
OKPEX	28–29 June 2019	Reed Convention Center, Midwest City, OK
Minnesota Stamp Expo	19–21 July 2019	Crystal Community Center, Crystal, MN
Americover	26–28 July 2019	Renaissance St. Louis Airport, St. Louis, MO
NTSS-APS StampShow 2019	1–4 August 2019	Hilton Omaha, Omaha, NE
BALPEX	30 Aug–1 Sep 2019	Baltimore Hunt Valley Inn, Baltimore, MD
SEAPEX	13–15 September 2019	Tukwila Community Center, Tukwila, WA
MILCOPEX	19–21 September 2019	Crowne Plaza Milwaukee Airport, Milwaukee, WI
Filatelic Fiesta	9–10 November 2019	Elks Lodge, San Jose, CA
CHICAGOPEX	22–24 November 2019	Westin Chicago Northwest, Itasca, IL
FLOREX	6–8 December 2019	Osceola Heritage Park Events Center, Kissimmee, FL
Omaha Stamp Show	12–13 September 2020	Metro Community Center, Omaha, NE
INDYPEX	2–4 October 2020	Hamilton Co. Fairgrounds, Noblesville, IN

A HANDY CHECKLIST OF SCOTT CATALOGUE PREFIXES

Clarence Chandler (Chan) Wright

[*Ed. note: Chan Wright (1920–2002), of Eugene, Oregon, was also the major compiler of Linn’s Stamp Identifier, an original project of the Greater Eugene Stamp Society. The original of this article was published in The Federated Philatelist, Number 156, April 1998, the journal of the Northwest Federation of Stamp Clubs. Because most of our readers use this catalogue, I thought this listing would be a useful reference. I have revised and updated it to include additional entries (including the “R” series). Since Wright assembled this list, Scott has added many new prefixes and has expanded the listing in the catalogue Introduction section. This list does not include all the many suffix letters that also exist.*]

The *Scott Catalogues* list stamps and related items under each country by functional classes. In the Introduction to the 1998 Vol. 1, Scott lists 39 classes in addition to the “Regular” issues, and assigns a prefix for each. That is a lot of classes, right? Yes, but these are only the classes used by more than one country.

Over the past several years I have developed the following listing, which undoubtedly is incomplete. (Please note that Scott also uses letter prefixes followed by numbers to identify its stamp illustrations, and these prefixes may, or may not, agree with those used for the class of stamps.) I wonder whether Scott has a complete list. Note that the only “R” series included is the “RA” Postal Tax Series. There are about 30 other prefixes in the “R” Revenue Series.

A small, but interesting, collection could be made by trying to get at least one stamp in each of these classes.

—	Regular Issues	H	Acknowledgment of Receipt
AR	Postal Fiscal	I	Late Fee
B	Semi-Postal	IRC	International Reply Coupon
BK	Booklet Regular	J	Postage Due
BKC	Booklet Airmail	JQ	Postage Due, Parcel Post
C	Air Post	JX	Porte De Mar
CB	Air Post Semi-Postal	K, #K	Offices Abroad
CBO	Air Post Semi-Postal Official	KB	Offices Abroad Semi-Postal
CE	Air Post Special Delivery	L, #L	Local or Subsidiary Issues
CF	Air Post Registration	#LB	Local or Subsidiary, Semi-Postal (US: Semi Officials)
CL	Air Post Semi-Official	#LC	Local or Subsidiary, Air Post
CLEU	SCADTA Stamps	#LE	Local or Subsidiary, Special Delivery
CM	Air Post Military	LF	Local or Subsidiary, Registration
CO	Air Post Official	LH	Local or Subsidiary, Ack of Receipt
CQ	Air Post Parcel Post	LJ	Local or Subsidiary, Postage Due
CP, #CP	Commemorative Panel	LO	Local or Subsidiary, Official (US: Carrier Stamps)
CVP, #CVP	Computer Vended	LOX	Post Office Seals, Typeset
CVPT	Machine Set-up and Test Labels	#LP	Local or Subsidiary, Newspaper
#CVT	Computer Vended, Test	#LU	Local or Subsidiary, Envelope
CVUX	Computer Vended, Postal Card	M	Military, Regular
D	Pneumatic Post	MC	Military, Air Post
E	Special Delivery	MQ	Military, Parcel Post
EB	Special Delivery Semi-Postal	MR	War Tax
EO	Special Delivery Official	N, #N	Occupation, Regular
EP	Encased Postage	NB, #NB	Occupation, Semi-Postal
ER	Delivery Tax	NC	Occupation, Air Post
EX	Personal Delivery	NCE	Occupation, Air Post Special Delivery
EY	Authorized Delivery	NE	Occupation, Special Delivery
F	Registration	NJ	Occupation, Postage Due
FA	Certified Mail	NO, #NO	Occupation, Official
FX	Registry Exchange Labels	NP	Occupation, Newspaper
G	Insured Letter		
GY	Marine Insurance		

NRA	Occupation, Postal Tax	RM	Revenue, Embossed Paper
NSC	Numismatic Souvenir Cards	RN	Revenue, Stamped Paper
NU	Occupation, Envelopes	RO	Revenue, Proprietary Match
NUX	Occupation, Postal Cards	RS	Revenue, Proprietary Medicine
NUZ	Occupation, Postal Cards, Official	RT	Revenue, Proprietary Perfumery
O, #O	Official	RU	Revenue, Proprietary Playing Cards
OX	Post Office Seals	RV	Revenue, Motor Vehicle
OXA	Post Office Seals, Dead Letter Office	RVB	Revenue, Boating
OXB	Post Office Seals, Dead Letter Office Return	RVC	Revenue, Camp
OXF	Post Office Seals, Registry	RVP	Revenue, Park Pass
OXSP	Post Office Seals, Sea Post	RVT	Revenue, Trailer
OY	Life Insurance	RW	Revenue, Hunting Permit
P	Newspaper	RX	Revenue, Distilled Spirits
#P	Die and Plate Proofs	RY	Revenue, Firearms Transfer
PC	Postage Currency	RZ	Revenue, Rectification
PN	Postal Note	S	Franchise (US: Post Office Savings Stamps)
PR	Newspaper and Periodical	#S	Specimen Stamps
PS	Postal Savings Stamps	SC	Souvenir Cards
Q	Parcel Post	SP	Souvenir Pages
QE	Special Handling	T	Telegraph Stamps
QI	Special Insurance Labels	#TC	Trial Color Proof
QRA	Parcel Post, Postal Tax	TS	Treasury Savings Stamps
QY	Parcel Post, Authorized Delivery	U	Stamped Envelopes & Letter Sheets
R	Revenue, Documentary and General	UC	Stamped Envelopes & Letter Sheets, Air
RA	Postal Tax, Regular Issues	UCM	Stamped Envelopes, Military Air Post
RAB	Postal Tax, Semi-Postal	UO	Stamped Envelopes, Official
RAC	Postal Tax, Airmail	UX	Postal Cards
RAJ	Postal Tax, Postage Due	UXC	Postal Cards, Air
RB	Revenue, Proprietary	UY	Postal Cards, Paid Reply
RC	Revenue, Future Delivery	UZ	Postal Cards, Official
RD	Revenue, Stock Transfer	#V	Imperforate Coils
RE	Revenue, Cordials and Wines	W	Stamped Wrappers
REA	Revenue, Beer	WO	Stamped Wrappers, Official
REF	Revenue, Fermented Fruit Juice	WS	War Savings Stamps
RF	Revenue, Playing Cards	WV	Sanitary Fair Stamps
RG	Revenue, Silver	WX	Christmas Seals
RH	Revenue, Cigarette Tubes	X, #X	Provisional Stamps
RI	Revenue, Potato Tax	#XU	Provisional Stamped Envelopes
RJ	Revenue, Tobacco Tax	Y	Revolutionary Issue
RJA	Revenue, Narcotic Tax	YF	Revolutionary Issue, Registration
RJM	Revenue, Marihuana Tax	YP	Revolutionary Issue, Newspaper
RK	Revenue, Consular Service Fee	Z	Prefecture Stamps (Japan)
RL	Revenue, Customs Fee		

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STAMP STORIES

Jack R. Congrove, BU1424

This is a continuation of the Biology Unit one-frame exhibit shown at the joint ATA-APS show in Columbus, Ohio. The theme was, "What Does (your topic) Do in Its Spare Time?" This came about due to a challenge by Bob Lamb at an ATA board meeting (see at right).

The group of exhibitors who created pages kindly allowed me to take the exhibit for display in the society showcase at the Seattle Philatelic Exhibition (SEAPEX) held 14-16 September.

Many attendees enjoyed the humor of the exhibit and the imaginations of the exhibitors. We also received a nice certificate of appreciation and ribbon.

I will show the remaining pages in upcoming editions of the journal.

The Spare Time Challenge!



At last year's National Topical Stamp Show, retiring ATA board member Bob Lamb took to teasingly asking questions...

To Laurie Ryan, "What do hedgehogs do in their spare time?"

To Jack Congrove, "What do butterflies do in their spare time?"

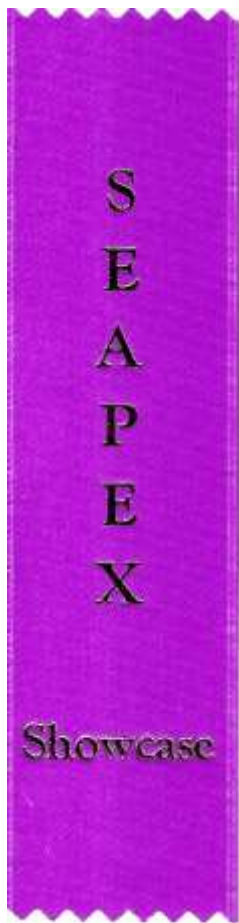
To Jean Stout, "All those cockroaches, what do they do in their spare time?"


Bob Lamb—
in his spare time!

You are undoubtedly getting the idea that Bob was suggesting that every topic has some spare time!

For some (probably forever unknown) reason, members of the Biology Study Unit found this joke to be ridiculously funny, so we took the challenge, and here are the results.

Enjoy!





SEAPEX2018


Appreciation

Society Showcase Exhibit

Presented to

Biology Study Unit of the ATA

Presented September 15, 2018
Seattle, Washington


SEAPEX President

BEAVERS

It is true that beavers spend a lot of their time cutting down trees, and building dams and lodges.



Nestlé "Animal Habitats" card

But in their spare time they enjoy music.



Some beavers especially enjoy singing, and one of their favorite times of the year is Christmas, when they can sing carols, especially "O, Christmas tree" (they love trees).



2002 Canadian Christmas Seals

Other beavers prefer playing in a band or orchestra, and their favorite is playing a woodwind instrument or drums.



Postal card issued by China Post, 2009



Indicium

BUTTERFLIES

Butterflies travel great distances; some follow each other all the way from Canada to Mexico.



Even young caterpillars like to follow each other around.



This behavior should not surprise us because in their spare time, butterflies love to march in **parades**.



Butterflies like to put on their people costumes and celebrate Mardi Gras and Carnival (they especially love the floats with flowers).

They are also good dancers and often perform fancy maneuvers along the parade route.

ZOONIVERSE

Jack R. Congrove, BU1424

With the advent of automated data collection that uses high resolution imaging and other refined instrumentation, scientists are dealing with huge volumes of data. And these volumes are increasing exponentially with each new generation of instrumentation. In astronomy, some instruments collect up to 2.5 terabytes (TB) of data each night. A terabyte is a unit of digital information equal to one million, million (10^{12}) bytes. (More accurately it is 2^{40} bytes.) Some future instrumentation will be able to collect 15 to 30 TB of data per night. One TB can hold about 310,000 photographs, or the text of more than 132,000 large books.

All of this data requires analysis (otherwise why collect it at all?). Individual scientists could spend their entire lifetime working around the clock and would only be able to sort through a tiny fraction of this volume. After all, how many large books have you read?

What's more, for much of this data, computers are of little help. Computers can organize the data, but it takes a human being to perform the analysis itself. It turns out that humans are more adept at picking out patterns than any computer algorithm yet devised. Computer programs easily get confused and often miss significant factors.

This is where Zooniverse comes in. Zooniverse was founded in 2007, as a collaboration among the Alder Planetarium, the University of Oxford, and the Citizen Science Alliance. Zooniverse started as an astronomy project that called on volunteers to classify galaxies in digital images from the Sloan Digital Sky Survey. It has since grown to more than 125 completed and current projects.

The Zooniverse website connects people with professional researchers to promote collaboration and discovery using large data sets. Zooniverse enables citizen scientists to take part in cutting-edge research with nothing more than an internet connection. And participants do not need specialized training. Each project describes the procedures and provides help and instruction to perform the required tasks. Each project also has on-line discussion boards for the exchange of information and ideas.

When the first project started, within a day, the site was receiving nearly 70,000 classifications per hour. Within a year, more than 50 million classifications had been submitted by more than 150,000 participants. The more volunteers who look at an image, the more likely the resulting classification is to be correct.



Rainforest Flowers



Reading Nature's Library

Now its diverse project categories include biology, history, climate science, the arts, medicine, ecology, and the social sciences. Participants can switch among projects. If you get tired of counting Weddell seals in Antarctica's Ross Sea (Weddell Seal Count: www.zooniverse.org/projects/slg0808/weddell-seal-count), you can sort through fragments of Middle Eastern and Mediterranean texts from the 10th to 13th centuries (Scribes of the Cairo Geniza: www.zooniverse.org/projects/judaicadh/scribes-of-the-cairo-geniza).

Obviously, this system benefits researchers by having others sort through the data to identify areas for further study and to cull out less significant information. But it also benefits the volunteers by enabling them to become part of a community involved in exploration and scientific advancement.

The names of volunteers are listed with those of the project leaders on discovery publications and dozens of volunteers have been co-authors on articles and scientific papers. Zooniverse puts the power of science in your hands and gives volunteers a first-hand look at how science progresses from raw data to analyzed results.

Currently, Zooniverse has 88 active projects. Below is a listing of the 46 current Zooniverse projects related to biology and ecology. There is something here to interest everyone. (www.zooniverse.org/projects)

Beluga Bits: Examine underwater photos of wild beluga whales and help identify the age, sex, and group size. Also need a keen eye to look for identifying marks to recognize beluga that return to this location year after year.

Snapshot Hoge Veluwe: Classify the wildlife in the pictures and contribute to important ecological research in the Netherlands.

South Sudan DiversityCam: South Sudan, the newest nation in the world, is extraordinarily biodiverse. Help conserve wildlife in this special and under-studied region by identifying animals in camera trap photos.

Rainforest Flowers: Help tag the Field Museum's photos of tropical flowers.

London Bird Records: Help recover 20th century bird observations collected by the London Natural History Society.

Penguin Watch: Tag penguins in remote regions to help researchers understand their lives and environment.

Candid Camera: Identify New York wildlife to create thriving forests.

eMammal: Help classify camera trap photos of different animals.

Invader ID: Help researchers track changes in coastal environments by identifying marine invertebrates.

HumBug: Discover mosquitoes from their buzz.

Manatee Chat: Identification and classification of manatee calls.

Grouse Grooves: Our lab is studying Greater Sage-grouse conservation, help us protect this important species.

Orangutan Nest Watch: Search drone images of Bornean rainforest for orangutan nests and fig trees.

Interior Least Tern and Piping Plover Predators: Help researchers identify predators of threatened and endangered species that nest within the Central Platte River Basin in Nebraska.

Reading Nature's Library: Help Manchester Museum discover the treasures in its collection.

Snapshot Grumeti: Check out photos of wildlife living in Grumeti, home of the ancient annual wildebeest migration, which drives the dynamics of this unique ecosystem.

Snapshot Serengeti: Help researchers explore the secret life of the Serengeti. Our cameras track the movement of thousands upon thousands of animals migrating with and following the wildebeest migration.

Snapshot Ruaha: Help researchers mitigate human-wildlife conflict by classifying photos that are used to assess communities' contributions to conservation efforts.

Project Plumage: Help researchers explore bird color with museum specimens.

Floating Forests: Help researchers uncover the history of Giant Kelp forests around the globe.

The Community Seagrass Initiative – Seagrass Explorer: The UK's most important marine habitat is in decline, help researchers understand why and find out more about the animals that live there.

Cheetahs of Central Namibia: The Cheetah Conservation Fund needs your assistance: Help us research the predator and prey species of central Namibia, home to the largest population of wild cheetah.

Parasite Safari: Do watering holes concentrate wildlife and their parasites? Help researchers to measure how different species balance the need for water with the risks of parasitism and predation.

Treiversity: Tag our trees. Help researchers identify plant features while learning about botany and exploring the Arnold Arboretum's Living Collection.

Seabirdwatch: The world's seabirds are in rapid decline. Help monitor them and change conservation worldwide.

Leaf Targeting: Help us understand how plants grow by marking leaves in plant images.

Wildwatch Kenya: We need your help to count, identify, and track the giraffes and other wildlife living in our field conservation sites in northern Kenya.

Weddell Seal Count: Are Antarctic Weddell seals threatened by fishing? By climate change? Help us find out.

Colorado Corridors Project: Let's build an overpass for wildlife. Help us identify animals that need a safe place to cross the road.

Fossil Atmospheres: Count cells of modern & fossil leaves. Help researchers track climate change over millions of years

Serengeti Wildebeest Count: Count the Serengeti wildebeest.

Michigan ZoomIN: Help researchers investigate wildlife in Michigan.

Western Montana Wildlife: Help process the thousands of creatures captured on camera.

Etch a Cell: Help researchers learn more about the structures that make up cells.

Steller Watch: Help researchers find out why the endangered Steller sea lion continues to decline in the Aleutian Islands.

Chicago Wildlife Watch: Help researchers understand how animals—from coyotes to chipmunks—share this great city with humans.

Arizona BatWatch: Help scientists learn about endangered Lesser Long-nosed Bats.

Mapping Change: Help researchers use over a century's worth of specimens to map the distribution of animals, plants, and fungi. Your data will let us know where species have been and predict where they may end up in the future.

Camera CATalogue: Analyze wildlife photos to help Panthera protect big cats.

Notes from Nature: Transcribe museum records from several groups including plants and insects.

Snapshot Wisconsin: Discover wildlife by classifying images captured on trail cameras.

Whales as Individuals: Help researchers identify individual Humpback Whales by clueing our computer algorithms in to patterns on their tails.

Chimp & See: Welcome to Africa—home of the chimpanzee. Our cameras have taken thousands of videos of these and other animals. Now we need your help to study, explore, and learn from them.

Science Gossip: In the Victorian period, scientists and members of the public worked together to further scientific discovery. Before computers and cameras they had to draw what they saw. Their drawings are locked away in the pages of Victorian periodicals, such as *Science Gossip*, *Recreative Science*, and *The Intellectual Observer*. Help us to classify their drawings and map the origins of citizen science.

Condor Watch: The California Condor is a critically endangered species and the population is suffering from the effects of lead poisoning. By tracking the location and social behavior of the animals we can better detect early warning signs of the illness.

Plankton Portal: Understanding where and when plankton occur at different depths in the ocean allows scientists to get a global understanding of the function and health of the ocean from small to global scales.

Reference: Klesman, Alison. "Zooniverse: A Citizen Science Success Story." *Astronomy*. October 2018. pp. 26–35.

SYMBOLIC BUTTERFLIES AND MOTHS

Vladimir Kachan, Belarus

Since the dawn of Man, we have co-existed with butterflies and moths. Their effect on man has been far-reaching, inspiring us in all aspects of the arts, sciences, and humanities.

The bright clusters and nebulae of planet Earth's night sky are often named for flowers or insects. Though its wingspan covers more than three light-years, the Butterfly Nebula (NGC 6302) is one of these. This celestial object looks like a delicate butterfly. But it is far from serene.

What resembles dainty butterfly wings are actually roiling cauldrons of gas heated to more than 36,000 degrees Fahrenheit. The gas is tearing across space at more than 600,000 miles per hour—fast enough to travel from Earth to the moon in 24 minutes! A new camera aboard NASA's Hubble Space Telescope snapped this image of the planetary nebula in July 2009.

Catalogued as NGC 6302, but more popularly called the Butterfly Nebula, it lies within our Milky Way galaxy, roughly 3,800 light-years away in the constellation Scorpius. The glowing gas is the outer layers of a star, expelled about 2,200 years. The structures in the nebula are among the most complex ever observed in planetary nebulae. The spectrum of NGC 6302 shows that its central star is one of the hottest stars in the galaxy, with a surface temperature in excess of 250,000 degrees Celsius, implying that the star from which it formed must have been very large.

James Abbott McNeill Whistler (1834–1903) was an American painter and graphic artist, active during the American Gilded Age and based primarily in the United Kingdom. His famous signature for his paintings was in the shape of a stylized butterfly possessing a long stinger for a tail. Whistler invented a monogram signature—a stylized butterfly based on his initials—and always placed it deliberately as a compositional element, not just a maker's mark. A butterfly surrounded by an oval was for Whistler as a symbol of his own image, an artist of elusive beauty, professing “art for art.”

Nobel Prize winner Edward Norton Lorenz (1917–2008) was an American mathematician, meteorologist, and a pioneer of chaos theory. He introduced the strange attractor notion and coined the term, butterfly effect.



Butterfly Nebula
St. Vincent, 2013, Sc#3848a



Whistler Painting
Micronesia, 2003, Sc#564



Edward Norton Lorenz
Guinea, 2008, Mi#5886

He proposed the butterfly effect to illustrate his chaos theory, wherein the flapping of butterfly wings could result in a hurricane thousands of miles away.

The butterfly effect is the sensitive dependence on initial conditions in which a small change in one state of a complex system can result in large differences in a later state. The term is derived from the metaphorical example of the details of a tornado (exact time of formation, exact path taken) being influenced by minor perturbations such as the flapping of the wings of a distant butterfly several weeks earlier.

Lorenz discovered the effect when he observed that runs of his weather model with initial condition data that was

rounded in a seemingly inconsequential manner would fail to reproduce the results of runs with the unrounded initial condition data. A very small change in initial conditions had created a significantly different outcome.

The term refers to the idea that a butterfly's wings could create tiny changes in the atmosphere that might ultimately alter the path of a tornado or delay, accelerate, or even prevent the occurrence of a tornado in another location. The butterfly does not power, or directly create the tornado. The term is intended to imply that the flapping wing represents a small change in the initial condition of the system, which cascades to large-scale alterations of events.

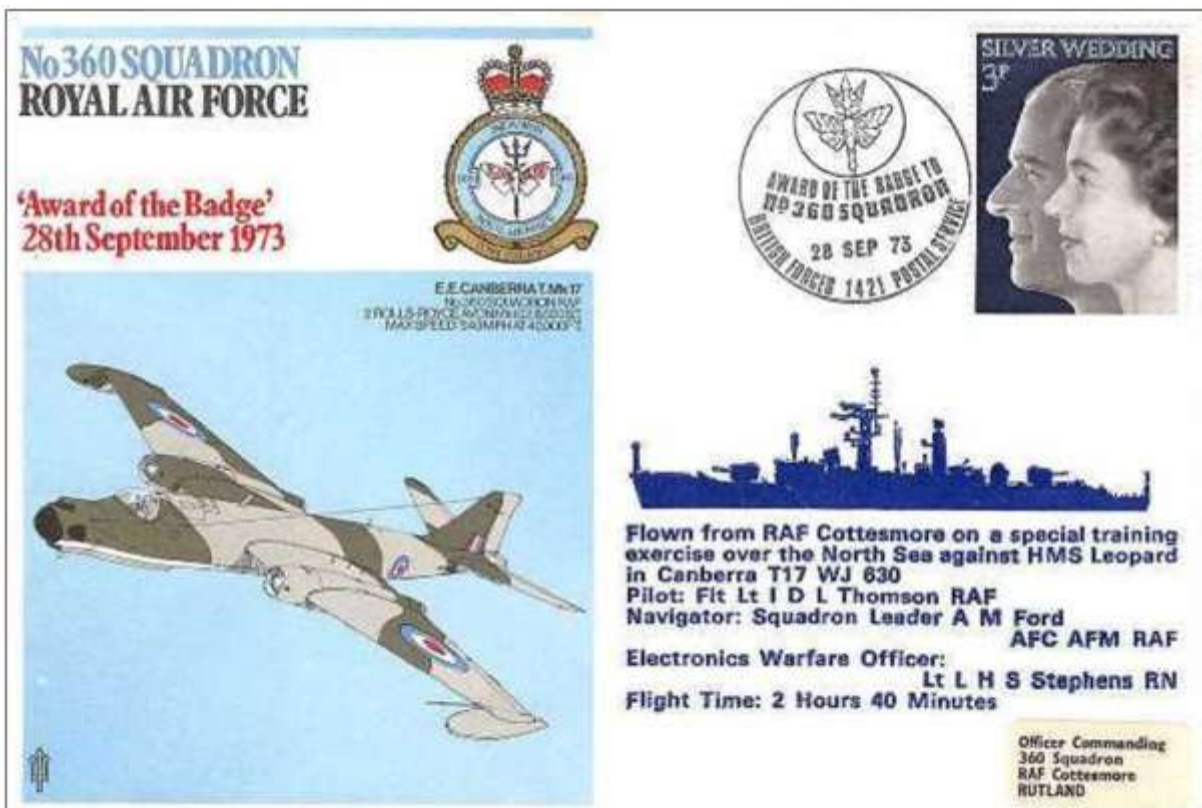
Had the butterfly not flapped its wings, the trajectory of the system might have been vastly different—but it is also equally possible that the set of conditions without the butterfly flapping its wings could lead to a tornado. The butterfly effect presents an obvious challenge to prediction, since initial conditions for a system such as the weather can never be known to complete accuracy. This problem motivated the development of ensemble forecasting, in which a number of forecasts are made from perturbed initial conditions.

Melese laodamia is a moth of the family Erebidae. It is found in Mexico, Panama, Colombia, Venezuela, and Trinidad. This species has a pair of sound-producing tymbals, where each organ is a swollen, air-filled structure formed externally from the lower part of the thorax with 15–20 grooves on its outer face. The moth can compress these using its basalar muscles and the grooves act as an array of “microtymbals,” each producing a brief pulse of sound. The result is a pattern of ultrasonic vibrations generated between 30 and 90 kHz with a pulse repetition frequency of 1200 per second. The ultrasound was thought to jam the sonar of insectivorous bats.

This moth was used in the insignia of the Royal Air Force (RAF) 360 Squadron, whose task was to develop equipment and tactics to jam enemy radars during the Cold War period. This joint Royal Navy/Royal Air Force squadron provided electronic countermeasures training for users of air defense radar systems.



Hurricane Hattie Relief
Br. Honduras, 1962, Sc#165



Melese laodamia on RAF 360 Squadron Badge Insignia Cachet and Special Cancel
Great Britain, 28 September 1973

Butterflies are often used to accompany the yin-yang symbol, representing perfect balance and harmony among Man and his universe. The yin yang symbol is all about finding unity amidst duality. It's a perfect sign for balance, harmony and moderation.

In Chinese philosophy, the concept of yin yang is used to describe how polar opposites, or seemingly contrary forces are interconnected and interdependent in the natural world, and how they give rise to each other in turn. Opposites thus only exist in relation to each other.

The concept lies at the origins of many branches of classical Chinese science and philosophy, as well as being a primary guideline of traditional Chinese medicine. The symbol is also a central principle of different forms of Chinese martial arts and exercise.

Many natural dualities (e.g., dark and light, female and male, low and high, cold and hot, water and fire, air and earth) are thought of as manifestations of yin and yang respectively. The national flag of South Korea has an image of the yin-yang symbol, which represents balance in the universe. A stamp from South Korea shows a moth with a marking in its wing that closely resembles the symbol on the flag.

In China, the butterfly is a symbol of long life because the second character in the word butterfly in Chinese has exactly the same pronunciation as the character (die) which means "70 or 80 years of age." The butterfly also signifies joy and warmth.

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



Alternative Medicine
Sri Lanka, 2000, Sc#1323



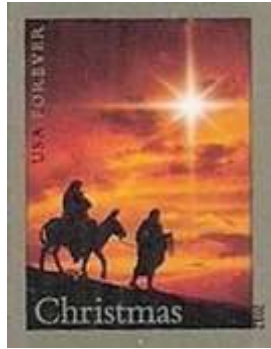
Metopta rectifasciata
South Korea, 1954, Sc#202A



CHRISTMAS BIOTA

How many different biological subjects can you find on Christmas stamps? That question occurred to me when I came across a stamp from Christmas Island showing a drawing of a Christmas tree composed of red crabs (Sc#539).

There are animals associated with the Holy Family and the birth of Jesus.



Many dozens of stamps have been issued that show holiday trees, both realistic and stylized, as well as other greenery and flowers associated with the season.



Besides Santa's reindeer, there are many portrayals of other animals that are either associated with the winter season, or evoke warm feelings of friendship and charity.



Many stamps (like the red crab tree) depict a wide variety of local or exotic animals that are not normally associated with the traditional western Christmas traditions.

An interesting and challenging collection could be assembled that shows at least one example of every biological subject found on a Christmas stamp from around the world.





BOTANY

Editor

Christopher E. Dahle, BU1269



New Listings

Scott#	Denom	Common Name/Scientific Name	Family/Subfamily	Code
ANDORRA (Spanish Admin.) 2015 May 25 (Walnuts) (Single) (odd shape)				
450	€1.45	Walnut, <i>Juglans regia</i> (nut & leaf)	Juglandaceae	Fr V A
AUSTRALIA 2018 May 21 (Silo Art) (Set/4, Bklt/4, SS/4)				
4804	\$1	<i>Banksia baxteri</i> (stylized) (perf 14×14 ³ / ₄)	Proteaceae	Fl A S
4804a		Bklt/4 (2ea Sc#4803–04)		
4806a		Bklt/4 (Sc#4803–06)		
4806b		Bklt/4 (2ea Sc#4804 & Sc#4806)		
4806d		SS/4 (Sc#4803–06)		Fl A S SS
4808	\$1	<i>Banksia baxteri</i> (stylized) (die cut 11 ¹ / ₄) (s/a)	Proteaceae	Fl A S
4808a		Bklt/10 (Sc#4808)		
CHINA (Taiwan) 2018 May 3 (Taichung City Tourist Attractions) (Set/4)				
4413	\$12	Cherry blossoms, <i>Prunus serrulata</i> (Wulling Farm)	Rosaceae	Fl T A
CHINA (People's Republic) 2018 March 25 (Crabapple Blossoms) (Set/4)				
4518	\$1.20	Plum Leaf Crabapple, <i>Malus prunifolia</i>	Rosaceae	Fl A
4519	\$1.20	Kaido Crabapple, <i>Malus micromalus</i>	Rosaceae	Fl A
4520	\$1.20	Honan Crabapple, <i>Malus honanensis</i>	Rosaceae	Fl A
4521	\$1.20	Toringo Crabapple, <i>Malus sieboldii</i>	Rosaceae	Fl A
FRANCE 2017 November 9 (Tulle Lace) (SS/2)				
5344b	85c	Rose, <i>Rosa × hybrida</i>	Rosaceae	Fl A
2018 March 23 (Tourist Attractions) (Bklt/8)				
5409	(€1.30)	Vineyard, Bourgogne, <i>Vitis vinifera</i>	Vitaceae	V A
5412a		Bklt/8 (Sc#5405–12)		
2018 May 18 (Greetings) (Bklt/12)				
5431	(80c)	Four-leaf Clover, <i>Trifolium pratense</i>	Fabaceae	V A
5431a		Bklt/12 (Sc#5420–31)		
2018 May 4 (Flower Arrangements) (Bklt/10) (Red Cross)				
B776	(80c+20c)	Anemones, <i>Anemone coronaria</i> (w/ shell)	Ranunculaceae	Fl A
B777	(80c+20c)	Asters, <i>Aster</i> sp.	Asteraceae	Fl B
		Daisies, <i>Argyranthemum frutescens</i>	Asteraceae	Fl B
B778	(80c+20c)	Dahlias, <i>Dahlia x hybrida</i>	Asteraceae	Fl B
		Roses, <i>Rosa × hybrida</i>	Rosaceae	Fl B
		Peaches, <i>Prunus persica</i>	Rosaceae	Fl B
B779	(80c+20c)	Snapdragons, <i>Antirrhinum majus</i> (w/ figurine)	Plantaginaceae	Fl B
		Cornflowers, <i>Centaurea cyanus</i>	Asteraceae	Fl B
B780	(80c+20c)	Peonies, <i>Paeonia officinalis</i> (w/ figurine)	Paeoniaceae	Fl A
B781	(80c+20c)	Buttercup, <i>Ranunculus</i> sp. (w/ letter & shell)	Ranunculaceae	Fl A
B782	(80c+20c)	Roses, <i>Rosa × hybrida</i> (w/ hourglass)	Rosaceae	Fl A
B783	(80c+20c)	Calendulas, <i>Calendula officinalis</i>	Asteraceae	Fl B
		Oranges, <i>Citrus sinensis</i>	Rutaceae	Fl B

FRANCE (continued)

B784	(80c+20c)	Sunflowers, <i>Helianthus annuus</i> (w/ teapot)	Asteraceae	Fl B
		Blue Thistles, <i>Eryngium bourgatii</i>	Apiaceae	Fl B
B785	(80c+20c)	Zinnias, <i>Zinnia elegans</i> (w/ snail & butterflies)	Asteraceae	Fl A
B785a		Bklt/10 (Sc#B776–85)		

FRENCH POLYNESIA**2018 June 22** (Medicinal Plants) (Single) (w/ basil scent)

1212	80fr	Basil, <i>Ocimum basilicum</i>	Lamiaceae	Fl V A
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GERMANY**2018** (Flowers Type of 2005) (see *Plants on Stamps, Vol. V*, p.62)

3009	100c	Cyclamen (Alpenveilchen), <i>Cyclamen persicum</i>	Primulaceae	Fl A
3010	145c	Love-in-a-Mist (Jungfer im Grünen), <i>Nigella damascena</i>	Ranunculaceae	Fl A
3011	379c	Indian Blanket, (Kokarden-blume), <i>Gaillardia pulchella</i> ,	Asteraceae	Fl A

2018 February 1 (25th anniv. Tafel Charity) (Single)

3023	70c	Apple (stylized), <i>Malus domestica</i>	Rosaceae	Fr A S
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2018 May 3 (Greetings) (Set/2)

3038	70c	Four-leaf Clover, <i>Trifolium pratense</i> (w/ paper boat)	Fabaceae	V B
3039a		Bklt/7 (Sc#2917–19, Sc#2975–76, Sc3038–39)		

2018 August 9 (Harz Mountain Spruce Forest) (Single)

3055	70c	Tree trunks, <i>Picea abies</i>	Pinaceae	T A
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HUNGARY**2018 May 2** (Lavender) (SS/1)

Perforated examples with green serial numbers, imperforate examples with red serial numbers, and perforated and imperforate examples with lavender serial numbers and lavender scent were printed in limited quantities.

4472	1000fo	Lavender (stylized), <i>Lavandula angustifolia</i> (black numbers)	Lamiaceae	Fl V S SS
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ITALY**2018 March 8** (Famous Women) (Set/4)

3498	95c	U/I flower w/ Eva Marnelli Calvino (1886–1978), botanist	Orchidaceae?	Fl B U
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JAPAN**2017 May 15** (Flowers for Mourning Type of 2014) (Set/3)

4106	62¥	Plum blossoms, <i>Prunus mume</i> (like Sc#3655)	Rosaceae	Fl A
4107	62¥	Sosmei-yoshino Cherry blossoms, <i>Prunus serrulata</i>	Rosaceae	Fl A
4108	62¥	Apricot blossoms, <i>Prunus mume</i>	Rosaceae	Fl A

2017 September 20 (Traditional Color Series #1) (2ea MS/10)

4148a	62¥	Fringed Pinks, <i>Dianthus superbus</i>	Caryophyllaceae	Fl A
4148b	62¥	Gentians, <i>Gentiana scabra</i>	Gentianaceae	Fl A
4148c	62¥	Mandarin Oranges, <i>Citrus reticulata</i>	Rutaceae	Fr A
4148e	62¥	Grapes, <i>Vitis vinifera</i>	Vitaceae	Fr A
4148f	62¥	Patrinia flowers, <i>Patrinia scabiosifolia</i>	Caprifoliaceae	Fl A
4148g	62¥	Morning Glories, <i>Ipomoea nil</i>	Convolvulaceae	Fl A
4148i	62¥	Rough Horsetails, <i>Equisetum hyemale</i>	Equisetaceae	V A
4148j	62¥	Fallen leaves		V A U
4149a	82¥	Maple leaves, <i>Acer palmatum</i>	Sapindaceae	V A
4149d	82¥	Chestnuts, <i>Castanea crenata</i>	Fagaceae	Fr A
4149e	82¥	Bush Clover, <i>Lespedeza thunbergii</i>	Fabaceae	Fl A
4149g	82¥	Persimmon, <i>Diospyros kaki</i>	Ebenaceae	Fr A
4149h	82¥	Walnuts, <i>Juglans ailantifolia</i>	Juglandaceae	Fr A
4149i	82¥	Grass	Poaceae	Fr A U

JORDAN**2018 June 28** (Vegetables) (MS/10)

2362a	20pi	Spinach, <i>Spinacia oleracea</i>	Amaranthaceae	V A MS
2362b	20pi	Common Mallow, <i>Malva verticillata</i>	Malvaceae	Fr A MS
2362c	20pi	Watercress, <i>Nasturtium officinale</i>	Brassicaceae	V A MS

JORDAN (continued)

2362d	20pi	Broccoli, <i>Brassica cretica</i> (= <i>B. oleracea</i> var. <i>italica</i>)	Brassicaceae	Fl A MS
2362e	20pi	Cauliflower, <i>Brassica cretica</i> (= <i>B. oleracea</i> var. <i>botrytis</i>)	Brassicaceae	Fl A MS
2362f	20pi	Corchorus (Jute), <i>Corchorus olitorius</i>	Malvaceae	V A MS
2362g	20pi	Dandelion, <i>Taraxacum campylodes</i>	Asteraceae	V A MS
2362h	20pi	Fava Beans, <i>Vicia faba</i>	Fabaceae	Fr A MS
2362i	20pi	Green Beans, <i>Phaseolus vulgaris</i>	Fabaceae	Fr A MS
2362j	20pi	Chard, <i>Beta vulgaris</i>	Amaranthaceae	V A MS

KIRIBATI**2017 October 14** (Flowers) (Set/6)

1040	25c	Te Kanawa (Glueberry), <i>Cordia subcordata</i>	Boraginaceae	Fl A
1041	50c	Te Kaituru (Everblooming Ixora), <i>Ixora casei</i>	Rubiaceae	Fl A
1042	75c	Te Nikarairai (Yellow Elder), <i>Tecoma stans</i>	Bignoniaceae	Fl A
1043	\$1	Te Rooti (Hibiscus), <i>Hibiscus rosa-sinensis</i>	Malvaceae	Fl A
1044	\$2.50	Te Meeria (Frangipani), <i>Plumeria alba</i>	Apocynaceae	Fl A
1045	\$4	Te Kiebu (Poison Bulb), <i>Crinum asiaticum</i>	Amaryllidaceae	Fl A

KYRGYZSTAN**2017 December 29** (Rice Varieties) (Set/2 & SS/2)

561	22s	Ak Turpak, <i>Oryza sativa</i>	Poaceae	Fr A
562	83s	Devzira, <i>Oryza sativa</i>	Poaceae	Fr A
562a		SS/2 (Sc#561–62)		Fr A SS

LIBERIA**2015 November 2** (Vincent van Gogh Flowers) (MS/6 & SS/1)

3079a	\$100	“Three Sunflowers in a Vase” (1888), <i>Helianthus annuus</i>	Asteraceae	Fl A MS
3079b	\$100	“Still Life: Japanese Vase with Roses and Anemones” (1890) <i>Rosa</i> sp.	Rosaceae	Fl B MS
		<i>Anemone coronaria</i>	Ranunculaceae	Fl B MS
3079c	\$100	“Vase with Red Poppies” (1886), <i>Papaver rhoeas</i>	Papaveraceae	Fl A MS
3079d	\$100	“Vase with Oleanders and Books” (1888), <i>Nerium oleander</i>	Apocynaceae	Fl A MS
3079e	\$100	“Vase with Red Gladioli” (1886), <i>Gladiolus</i> sp.	Iridaceae	Fl A MS
3079f	\$100	“Blossoming Almond Branch in a Glass with a Book” (1888) <i>Prunus dulcis</i>	Rosaceae	Fl A MS
3080	SS \$350	“Still Life: Vase with Pink Roses” (1890), <i>Rosa</i> sp.	Rosaceae	Fl A SS

2016 February 20 (Plants & Flowers of Africa) (MS/4, MS/6, SS/1)

3109a	\$100	Oyster Plant, <i>Acanthus mollis</i>	Acanthaceae	Fl A MS
3109b	\$100	Almond, <i>Prunus dulcis</i>	Rosaceae	Fl A MS
3109c	\$100	Cardoon, <i>Cynara cardunculus</i>	Asteraceae	Fl A MS
3109d	\$100	Purple Foxglove, <i>Digitalis purpurea</i>	Plantaginaceae	Fl A MS
3109	Margin	LL: Grapes, <i>Vitis vinifera</i>	Vitaceae	Fr Z MS
3110a	\$100	Burning Bush, <i>Dictamnus albus</i>	Rutaceae	Fl A MS
3110b	\$100	Bay Laurel, <i>Laurus nobilis</i>	Lauraceae	Fl A MS
3110c	\$100	African Oil Palm, <i>Elaeis guineensis</i>	Arecaceae	Fl A MS
3110d	\$100	Poppy, <i>Papaver rhoeas</i>	Papaveraceae	Fl A MS
3110e	\$100	Bird Cherry, <i>Prunus avium</i>	Rosaceae	Fl A MS
3110f	\$100	Blessed Mary’s Thistle, <i>Silybum marianum</i>	Asteraceae	Fl A MS
3110	Margin	Top: Crocus? <i>Crocus</i> sp.	Iridaceae	Fl Z U MS
3111	SS \$350	Maidenhair Ferns, <i>Adiantum capillus-veneris</i> (also on margin)	Adiantaceae	V A Z SS

MACEDONIA**2017 October 19** (Flora) (Horiz Strip/4)

761a	11d	Marijuana, <i>Cannabis sativa</i>	Cannabaceae	V A
761b	20d	Cotton, <i>Gossypium hirsutum</i>	Malvaceae	Fl Fr A
761c	50d	Tobacco, <i>Nicotiana tabacum</i>	Solanaceae	V A
761d	100d	Opium Poppy, <i>Papaver somniferum</i>	Papaveraceae	Fl Fr A

MACEDONIA (continued)		2017 December 22 (Vegetables) (Set/4)	
766	18d	Celeriac, <i>Apium graveolens</i>	Apiaceae V A
767	18d	Butternut Squash, <i>Cucurbita moschata</i>	Cucurbitaceae Fr A
768	18d	Radishes, <i>Raphanus raphanistrum</i> ssp. <i>sativus</i>	Brassicaceae V A
769	18d	Red Onions, <i>Allium cepa</i>	Amaryllidaceae V A
MALAYSIA		2018 April 24 (Citrus Fruits) (Set/3 & SS/1)	
1753	60c	Lime, <i>Citrus aurantiifolia</i>	Rutaceae Fr A
1754	60c	Makrut Lime, <i>Citrus hystrix</i>	Rutaceae Fr A
1755	60c	Calamondin, <i>Citrus microcarpa</i>	Rutaceae Fr A
1756	SS \$6	Pomelo, <i>Citrus grandis</i>	Rutaceae Fr A SS
		2018 May 17 (Medicinal Plants) (Set/3 & SS/1)	
1757	60c	Dogfruit, <i>Archidendron jiringa</i>	Fabaceae Fl Fr A
1758	80c	Freshwater Mangrove, <i>Barringtonia asiatica</i>	Lecythidaceae Fl Fr A
1759	\$1	Butter Fruit, <i>Litsea garciae</i>	Lauraceae Fl Fr A
1760	SS \$3	Bitter Beans, <i>Parkia speciosa</i>	Fabaceae Fl Fr A SS
MALAYSIA (Kelantan)		2018 February 13 (Flowers & Arms of Sultan Muhammad V) (SS/6)	
131	10c	Lotus, <i>Nelumbium nelumbo</i>	Nelumbonaceae Fl A
132	20c	Hydrangea, <i>Hydrangea macrophylla</i>	Hydrangeaceae Fl A
133	30c	Amaryllis, <i>Hippeastrum reticulatum</i>	Amaryllidaceae Fl A
134	40c	Bougainvillea, <i>Bougainvillea spectabilis</i>	Nyctaginaceae Fl A
135	50c	Morning Glory, <i>Ipomoea indica</i>	Convolvulaceae Fl A
136	60c	Hibiscus, <i>Hibiscus rosa-sinensis</i>	Malvaceae Fl A
136a	SS/6 (Sc#131–36)		Fl A SS
MALDIVIVE ISLANDS		2015 August 25 (Paintings) (MS/4)	
3471a	20r	Murillo ptg: "Boys Eating Grapes and Melon" <i>Vitis vinifera</i>	Vitaceae Fr B MS
		<i>Cucurbita pepo</i>	Cucurbitaceae Fr B MS
3474a	20r	Van Gogh ptg: "Three Sunflowers," <i>Helianthus annuus</i>	Asteraceae Fl A MS
		2016 May 23 (Butterflies & Orchids) (MS/4 & SS/1)	
3606a	20r	<i>Cattleya coccinea</i>	Orchidaceae Fl B MS
3606b	20r	<i>Cattleya purpurata</i>	Orchidaceae Fl B MS
3606c	20r	<i>Mormodes cogniauxii</i>	Orchidaceae Fl B MS
3606d	20r	<i>Disa uniflora</i>	Orchidaceae Fl B MS
3615	SS 60r	<i>Oncidium (=Odontoglossum) hallii</i>	Orchidaceae Fl B SS
MOLDOVA		2018 March 1 (Trees) (Set/4 & MS/8)	
971	1.201	Poplar, <i>Populus</i> sp.	Salicaceae T A
972	1.751	Horse chestnut, <i>Aesculus hippocastanum</i>	Hippocastanaceae T A
973	51	Norway maple, <i>Acer platanoides</i>	Sapindaceae T A
974	5.751	European oak, <i>Quercus robur</i>	Fagaceae T A
974a	MS/8 (2ea Sc#971–74)		
		2018 April 13 (Months of the Year) (MS/3+1 label)	
980a	5.751	Tulips, <i>Tulipa hybrida</i>	Liliaceae Fl B MS
		Daffodils, <i>Narcissus pseudonarcissus</i>	Amaryllidaceae Fl B MS
980b	5.751	Cherry blossoms, <i>Prunus avium</i>	Rosaceae Fl B MS
980c	5.751	Cherries, <i>Prunus avium</i>	Rosaceae Fl A MS
980	Margin	Multiple U/I flowers & plants	Fl U Z MS

MONACO		2018 March 7 (Intl. Flower Arrangement Festival) (Single)		
2920	78c	U/I flowers		Fl A U
		2018 March 7 (50th anniv. Garden Club of Monaco) (Single)		
2922	€1.90	Roses, <i>Rosa × hybrida</i>	Rosaceae	Fl A
		2018 April 30 (Exotic Garden of Monaco) (Single)		
2929	80c	U/I plants	Cactaceae, Euphorbiaceae, Xanthorrhoeaceae	V B U
MONGOLIA		2017 November 15 (National Flower of Mongolia) (SS/2)		
2881a	SS 1500t	Butterfly Blue, <i>Scabiosa comosa</i> (w/ flag)	Caprifoliaceae	Fl B SS
2881b	SS 1500t	Butterfly Blue, <i>Scabiosa comosa</i> (w/ traditional costume)	Caprifoliaceae	Fl B SS
2881	Margin	UL & LR: Same species		Fl Z SS
MONTENEGRO		2016 April 19 (Flower) (Single & MS/8+label)		
396	95c	<i>Gentiana kochiana</i>	Gentianaceae	Fl A
		2018 April 12 (Flowers) (Set/2)		
428	30c	Texas Balloonwort, <i>Sphaerocarpos texanus</i>	Spaerocarpaceae	V A
429	95c	Yellow Gentian, <i>Gentiana lutea</i>	Gentianaceae	Fl A
NEW ZEALAND		2018 June 6 (Personalized Stamp Type of 2016) (MS/10)		
2799b	\$1.20	Fern fiddlehead		V A U MS
2799f	\$1.20	Pohuhukawa flowers, <i>Metrosideros excelsa</i>	Myrtaceae	Fl A MS
2799h	\$2.40	Fern fiddlehead		V A U MS
2799j	\$2.40	Pohuhukawa flowers, <i>Metrosideros excelsa</i>	Myrtaceae	Fl A MS
PERU		2018 February 16 (Flower) (Single) (dated 2017)		
1962	5s	<i>Epidendrum nocturnum</i>	Orchidaceae	Fl A
		2018 February 20 (Peruvian Exports) (Set/2) (dated 2017)		
1967	10s	Cacao pods, <i>Theobroma cacao</i>	Malvaceae	Fr A
1968	10s	Cochineal, <i>Opuntia</i> sp.	Cactaceae	V A U
PITCAIRN ISLAND		2018 July 18 (Flowers) (MS/6)		
847a	\$!	Hibiscus, <i>Hibiscus rosa-sinensis</i>	Malvaceae	Fl A MS
847b	\$!	Bird-of-paradise, <i>Strelitzia reginae</i>	Strelitziaceae	Fl A MS
847c	\$!	Lobster plant, <i>Heliconia rostrata</i>	Heliconiaceae	Fl A MS
847d	\$2	Anthurium, <i>Anthurium andraeanum</i>	Araceae	Fl A MS
847e	\$2	Red ginger, <i>Alpinia purpurata</i>	Zingiberaceae	Fl A MS
847f	\$2	Allamanda, <i>Allamanda blanchetii</i>	Apocynaceae	Fl A MS
POLAND		2018 May 11 (Flowers & Fruit Type of 2009) (Single)		
4332	6.80z	Lily of the Valley, <i>Convallaria majalis</i>	Asparagaceae	Fl A
ROMANIA		2017 November 17 (Geraniums) (Set/4, 4ea MS/5+label, SS/4)		
6025	2.20l	<i>Pelargonium peltatum</i>	Geraniaceae	Fl A
6025a		MS/5+1 label (Sc#6025)		
6026	2.50l	<i>Pelargonium zonale</i>	Geraniaceae	Fl A
6026a		MS/5+1 label (Sc#6026)		
6027	8l	<i>Pelargonium grandiflorum</i>	Geraniaceae	Fl A
6027a		MS/5+1 label (Sc#6027)		
6028	15l	<i>Pelargonium zonale</i>	Geraniaceae	Fl A
6028a		MS/5+1 label (Sc#6028)		
Note		SS/4 (Sc#6025–28) (printed in limited quantities)		Fl A SS

ROMANIA (continued)		2017 November 24 (Trees) (Set/2 & 2ea MS/5+label)	
6031	8l	Rowan, <i>Sorbus aucuparia</i>	Rosaceae Fr T A
6031a		MS/5+label (Sc#6031)	
6032	8l	Spruce, <i>Picea abies</i>	Pinaceae Fr T A
6032a		MS/5+label (Sc#6032)	
		2018 April 27 (85th anniv. Bucharest Pinacothèque) (Set/4 & MS/5)	
6094	4l	Gheorghe Petrascu ptg: "Zinnias," <i>Zinnia elegans</i>	Asteraceae Fl A
6094a		MS/5+label (Sc#6094)	
6095	4.50l	Stephan Luchian ptg: "Cornflowers," <i>Centaurea cyanus</i>	Asteraceae Fl A
6095a		MS/5+label (Sc#6095)	
RUSSIA		2018 May 16 (Flowers of Japan & Russia) (Pair)	
7923a	27r	Chrysanthemums, <i>Chrysanthemum</i> sp.	Asteraceae Fl B
		Cherry blossoms, <i>Prunus serrulata</i>	Rosaceae Fl B
7923b	27r	Daisies, <i>Leucanthemum vulgare</i>	Asteraceae Fl B
		Rhododendrons, <i>Rhododendron</i> sp.	Ericaceae Fl B
ST. VINCENT		2015 January 1 (Battle of Somme Centenary) (2ea MS/4 & SS1)	
3977-78	\$3.25	Poppies, <i>Papaver rhoeas</i>	Papaveraceae Fl C MS
3979-80	SS \$10	Poppies, <i>Papaver rhoeas</i>	Papaveraceae Fl C SS
		2017 November 18 (Caribbean Fruits) (2ea MS/6)	
4126a	75c	Starfruit on tree, <i>Averrhoa carambola</i>	Oxalidaceae Fr T A
4126b	\$1.75	Sliced Starfruit, <i>Averrhoa carambola</i>	Oxalidaceae Fr A
4126c	\$2.75	Apple Guavas on tree, <i>Psidium guajava</i>	Myrtaceae Fr T A
4126d	\$3.75	Sliced Apple Guava, <i>Psidium guajava</i>	Myrtaceae Fr A
4126e	\$4.75	Jackfruit on tree, <i>Artocarpus heterophyllus</i>	Moraceae Fr T A
4126f	\$5.75	Sliced Jackfruit, <i>Artocarpus heterophyllus</i>	Moraceae Fr A
4127a	\$2	Gooseberries on bush, <i>Ribes uva-crispa</i>	Grossulariaceae Fr T A
4127b	\$4	Custard Apples on tree, <i>Annona reticulata</i>	Annonaceae Fr T A
4127c	\$6	Purple Star Apple on tree, <i>Chrysophyllum cainito</i>	Sapotaceae Fr T A
4127d	\$8	Sliced Gooseberries, <i>Ribes uva-crispa</i>	Grossulariaceae Fr A
4127e	\$10	Sliced Custard Apple, <i>Annona reticulata</i>	Annonaceae Fr A
4127f	\$12	Sliced Purple Star Apple, <i>Chrysophyllum cainito</i>	Sapotaceae Fr A
SIERRA LEONE		2017 March 30 (Orchids) (MS/4 & SS/1)	
4182a	9800le	Red Disa, <i>Disa uniflora</i>	Orchidaceae Fl A MS
4182b	9800le	<i>Cymbidium</i> hybrid	Orchidaceae Fl A MS
4182c	9800le	Hardy Chinese Orchid, <i>Pleione limprichtii</i>	Orchidaceae Fl A MS
4182d	9800le	<i>Vandopsis lissochiloides</i>	Orchidaceae Fl A MS
4201	SS 40000le	Northern Queen of Sheba, <i>Thelymitra pulcherrima</i>	Orchidaceae Fl A SS
	Margin	UL: <i>Thelymitra jonesii</i>	Orchidaceae Fl Z SS
		Ctr: <i>Myrmecophila</i> (= <i>Schomburgkia</i>) <i>tibicinis</i>	Orchidaceae Fl Z SS
		LR: <i>Myrmecophila brysiana</i>	Orchidaceae Fl Z SS
		2017 August 30 (Orchids) (MS/4 & SS/1)	
4358a	9800le	<i>Cattleya bicalhoi</i> (= <i>Laelia dayana</i>)	Orchidaceae Fl A MS
4358b	9800le	<i>Angraecum leonis</i>	Orchidaceae Fl A MS
4358c	9800le	<i>Bifrenaria inodora</i>	Orchidaceae Fl A MS
4358d	9800le	<i>Epidendrum</i> hybrid	Orchidaceae Fl A MS
4378	SS 40000le	<i>Bulbophyllum pteroglossum</i> (= <i>monanthum</i>)	Orchidaceae Fl A SS
	Margin	UR: <i>Bulbophyllum rothschildianum</i>	Orchidaceae Fl Z SS
		LR: <i>Cattleya aurantiaca</i>	Orchidaceae Fl Z SS
		LL: <i>Dracula chestertonii</i>	Orchidaceae Fl Z SS

SIERRA LEONE (continued)		2017 September 29 (Orchids) (MS/4 & SS/1)		
4476a	9800le	<i>Trichopilia (=Helcia) brevis</i>	Orchidaceae	Fl A MS
4476b	9800le	Sweet Scented Lycaste, <i>Lycaste aromatica</i>	Orchidaceae	Fl A MS
4476c	9800le	Downy Rattlesnake Plantain, <i>Goodyera pubescens</i>	Orchidaceae	Fl A MS
4476d	9800le	<i>Bartholina burmanniana</i>	Orchidaceae	Fl A MS
	Margin	LR: Large Duck Orchid, <i>Caleana major</i>	Orchidaceae	Fl Z MS
4496	SS 40000le	Red-lipped Cymbidiella, <i>Cymbidiella pardalina (=rhodochila)</i>	Orchidaceae	Fl A SS
	Margin	LL: <i>Cattleya</i> hybrid	Orchidaceae	Fl Z SS
		Bot: <i>Dendrobium amplum</i> (Cap: <i>Epigeneium amplum</i>)	Orchidaceae	Fl Z SS
		LR: <i>Miltoniopsis santanaei</i>	Orchidaceae	Fl Z SS
SINGAPORE		2018 June 22 (125th anniv. Vanda Miss Joaquim Orchid) (Set/4 & SS/1)		
1894	(30c)	Vanda Miss Joaquim Orchid, <i>Papilionanthe 'Miss Joaquim'</i>	Orchidaceae	Fl A
1895	70c	Same species	Orchidaceae	Fl A
1896	90c	Same species	Orchidaceae	Fl A
1897	\$1.30	Same species	Orchidaceae	Fl A
1898	SS \$5	Vanda Miss Joaquim Orchid, <i>Papilionanthe 'Miss Joaquim'</i>	Orchidaceae	Fl A SS
SLOVAKIA		2018 June 1 (Peonies) (Single)		
795	(50c)	Peonies, <i>Paeonia officinalis</i>	Paeoniaceae	Fl A
SWITZERLAND		2018 September 6 (Greetings Stamps) (Block/4)		
1695	85c	Four-leaf Clover, <i>Trifolium pratense</i> (w/ flowers)	Fabaceae	Fl V A
1698	100c	Fern in envelope		V B U
1698a		Block/4 (Sc#1695–98)		
TURKEY		2018 March 21 (Flora) (Set/7)		
3591	2l	Fritillary (Crown Imperial), <i>Fritillaria imperialis</i>	Liliaceae	Fl A
3592	2l	Olive, <i>Olea europaea</i>	Oleaceae	Fr A
3593	2l	Tulip, <i>Tulipa</i> sp.	Liliaceae	Fl A
3594	2l	Yanardöner, <i>Cyanus (=Centaurea) tchihatcheffii</i>	Asteraceae	Fl A
3595	2l	Pontic Rhododendron, <i>Rhododendron ponticum</i>	Ericaceae	Fl A
3596	2l	Antalya Crocus, <i>Crocus antalyensis</i>	Iridaceae	Fl A
3597	2l	Cornflower, <i>Centaurea cyanus</i>	Asteraceae	Fl A
		2018 April 18 (Spices) (Set/4)		
3600	20k	Mint, <i>Mentha spicata</i>	Lamiaceae	V A
3601	50k	Black pepper, <i>Piper nigrum</i>	Piperaceae	Fr A
3602	2.30l	Chili pepper, <i>Capsicum annuum</i>	Solanaceae	Fr A
3603	6.50l	Cumin, <i>Cuminum cyminum</i>	Apiaceae	Fr A
TUVALU		2018 May 30 (Colorful Fruits) (MS/3 & SS/2)		
1415a	\$2	Papaya, <i>Carica papaya</i> (Cap: Pomegranate)	Caricaceae	Fr A MS
1415b	\$2.50	Coconut, <i>Cocos nucifera</i>	Arecaceae	Fr A MS
1415c	\$3	Cavendish Banana, <i>Musa × paradisiaca</i>	Musaceae	Fr A MS
1415	Margin	Oranges, <i>Citrus sinensis</i>	Rutaceae	Fr Z MS
1416a	SS \$3.50	Pomegranate, <i>Punica granatum</i> (also on margin)	Punicaceae	Fr A Z SS
1416b	SS \$4	Pink Grapefruit, <i>Citrus paradisi</i> (also on margin)	Rutaceae	Fr A Z SS
		2018 May 30 (Orchids) (MS/4 & SS/2)		
1421a	\$1	<i>Encyclia cordigera</i>	Orchidaceae	Fl A MS
1421b	\$2	<i>Trichocentrum cavendishianum</i>	Orchidaceae	Fl A MS
1421c	\$3	Large-flowered Sobralia, <i>Sobralia macrantha</i>	Orchidaceae	Fl A MS
1421d	\$4	<i>Oncidium candelabrum (=Otoglossum coronarium)</i>	Orchidaceae	Fl A MS
1422a	SS \$3	<i>Guarianthe aurantica</i>	Orchidaceae	Fl A SS
1422b	SS \$4	<i>Guarianthe skinneri</i>	Orchidaceae	Fl A SS

URUGUAY**2018 January 23** (30th anniv. Diplomatic Relations w/ China) (SS/2)

2617a	20p	Pink Ipê, <i>Handroanthus impetiginosus</i> (also on margin)	Bignoniaceae	FI B Z SS
2617b	65p	Bamboo, <i>Bambusa vulgaris</i> (also on margin)	Poaceae	V B Z SS

TUVALU MISIDENTIFIES FRUIT

Sc#1415a from Tuvalu was issued on 30 May 2018, on a miniature sheet of three titled, "Colorful Fruits." The inscription on the \$2.00 stamp reads "Pomegranate/*Punica granatum*," but it is not a Pomegranate.

It is in fact a Papaya, *Carica papaya*, cut open to reveal all the seeds inside. The other images on the sheet are captioned correctly. On the \$2.50 stamp is a cracked open Coconut, *Cocos nucifera*, and on the \$3.00 stamp, a Cavendish Banana, *Musa acuminata*.

A souvenir sheet containing a \$3.50 stamp and a \$4.00 stamp was issued also as part of this set. The \$3.50 stamp actually shows a Pomegranate and the \$4.00 stamp shows a sliced Pink Grapefruit, *Citrus paradisi*. The background of this sheet also shows images of these two fruits.

One wonders if they intended to show a pomegranate and chose a picture of the wrong fruit, or if the designer was just careless with the caption.



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NEW PLANTS IN THE PHILATELIC HERBARIUM

Christopher E. Dahle, BU1269

Ixiolirion tartaricum, IXIOLIRIACEAE

Common name: Siberian Lily

Synonyms: 18

Bulbous herb to 45 cm. Flower color ranges from light blue to dark violet. Blooms late spring to summer. Grow on rocky hillsides to elevations of 2675 m. Native to central and southwest Asia from the Sinai Peninsula to Xinjiang Province of China.

Armenia Sc#1132. Issued 29 December 2017, Set/2, Flora and Fauna. Printed by Cartor Security Printing.



Orbea knobelli, APOCYNACEAE

Common name: Starfish Plant, Carrion Flower

Synonyms: *Stapelia variegata*, *S. variegata* var. *brevicornis*, *Stisseria variegata*

Leafless, glabrous, clump-forming, succulent perennial. The four-angled stems are usually prominently sharp-toothed, with a soft tip, grey green mottled purple growing in full sun. Each stem can reach over 25 cm. Starfish-like flower, up to 7.5 cm. Drought resistant plant found amongst shrubs in deep Kalahari sands or on calcrete around the Makgadikgadi pans of Botswana.

Botswana Sc#1037. Issued 5 December 2017. Christmas issue, Flowers of the Desert, Set/4. Designed by Ann Gollifer and graphically designed by Irfan Kokabi. Printed in four colors on 103 gsm, Tullis Russell high reading yellow/green phosphor gummed stamp paper.



Calanthe puberula, ORCHIDACEAE

Common name: Hairy Calanthe

Synonyms: 12

Cool-to-cold growing terrestrial with narrowly cylindrical pseudobulbs carrying 4 to 5, basal, green, leaves. Blooms in late spring and summer bearing one or two 23–40 cm long, 4–10-flowered inflorescences. Range: Himalayas to temperate East Asia in moist evergreen broad leaved forests at elevations of 1200 to 3000 m.

China (Taiwan) Sc#4395. Wild Orchids of Taiwan definitive issued 26 January 2018. Designer Chi-jen Lai. Printed by La Poste (France) by offset on phosphorescent stamp paper, or self-adhesive stamp paper in quantity of 60 million.



Neottia meifongensis, ORCHIDACEAE

Synonyms: *Listera meifongensis*

Plants 12–25 cm tall, with short rhizomes. Leaves sessile, broadly ovate. The labellum is yellowish-green and semi-transparent. The flowers measure 1.2 to 1.8 cm across. It flowers in summer. Endemic to forests of *Abies kawakamii* and *Tsuga chinensis* var. *formosana*, 2,700–3,000 m, in central Taiwan.

China (Taiwan) Sc#4398. Issued 27 February 2018 for definitive issue Wild Orchids of Taiwan. Designed by Chi-jen Lai. Printed by China Color Printing Co. Ltd. on phosphorescent stamp paper in quantities of 1.2 million.



Dendrobium chryseum, ORCHIDACEAE

Common name: Yellow Flowered Dendrobium

Synonyms: 10

Large, epiphytic or lithophytic orchid has golden, or almost orange flowers that are 4–7 cm. It flowers from spring until midsummer. Common at 1,000–2,150 m altitudes. Found throughout the western Himalayas, eastern Himalayas, Assam, Bangladesh, Bhutan, Nepal, Myanmar, Thailand, Laos, southern China, Vietnam, and Taiwan.

China, Taiwan. Sc#4399. Issued 27 February 2018, for definitive issue Wild Orchids of Taiwan. Designed by Chi-jen Lai. Printed by China Color Printing Co. Ltd. on phosphorescent stamp paper in quantities of 6 million.

***Bulbophyllum pectinatum***, ORCHIDACEAE

Common name: Comb-like Bulbophyllum

Synonyms: *Bulbophyllum pectinatum* var. *pectinatum*, *B. pectinatum* var. *transarisanense*, *B. spectabile*, *B. transarisanense*, *B. transarisanense* f. *alboviride*, *B. viridiflorum*

Small 5 cm plant has 1.5 cm olive shaped pseudobulbs, each with a single oval leaf. Compact growth habit. Inflorescence holds the single flower above the foliage. Large light green flower is spotted and striped with chocolate, 5 cm. Blooms late spring to summer. Range: Southern China, Assam, Myanmar, Vietnam, and Taiwan, where it is found in forests at 1,000–2,000 m throughout the island.

China, Taiwan. Scott #4400. Issued 26 January 2018 for definitive issue Wild Orchids of Taiwan. Designed by Chi-jen Lai. Printed by La Poste (France) on phosphorescent stamp paper or self-adhesive stamp paper in quantities of 100 million.

***Drynaria propinqua***, POLYPODIACEAE

Common name: Basket Fern

Synonyms:

Basket ferns are characterized by the presence of two types of fronds, fertile foliage fronds and sterile nest fronds. Dark green foliage fronds are large, 0.61–1.22 m long, with elongated stalks. They are deeply lobed or pinnate, winged, and bear sori on the bottom surfaces. Epiphytic or epipetric. Native to Nepal, Bhutan, India, Southeast Asia, and China. Found on mossy tree trunks in dense evergreen forests at 1,200–1,700 m, locally abundant.

Nepal Sc#1059. Issued in a Set/6 in 2017.

***Nephrolepis cordifolia***, NEPHROLEPIDACEAE

Common names: Fishbone Fern, Tuberous Sword Fern, Tuber Ladder Fern, Erect Sword Fern, Narrow Sword Fern, Ladder Fern, and Herringbone Fern

Synonyms: *Aspidium cordifolium*, *A. tuberosum*, *Nephrodium tuberosum*, *Nephrolepis cordifolia* var. *tuberosa*, *Nephrolepis exaltata* var. *tuberosa*, *Polypodium cordifolium*

Tuberous herbaceous plant, epiphytic, epilithic, or terrestrial, with fronds once pinnate, to 1 m long and 7 cm wide. In its native Australia, it occurs in rainforest or open forest in eastern Queensland and northeastern New South Wales. Grown as an ornamental.

Nepal Sc#1060. Issued in 2017.



Harrisia bonplandii, CACTACEAE

Common name: Applecactus, Midnight Lady, Queen of the Night, Tuna

Synonyms: *Cereus bonplandii*, *C. guelichii*, *C. pomanensis* var. *grossei*, *Eriocereus bonplandii*, *E. guelichii*, *Harrisia guelichii*, *H. pomanensis* ssp. *bonplandii*

Stems: Slender and weak, some erect or clambering and reaching 1–1.5 m, the others procumbent, arching, or trailing on the ground up to 2.5–3 m long, and 3–8 cm in diameter, strongly 3- to 4-angled. Flowers: White, nocturnal, funnellform, 15–22 cm long, closing soon after sunrise. Fruit: Edible, globular, and strongly tuberculate, 4–6 cm in diameter, red. Grows in the Gran Chaco (Paraguay, north of Argentina, Bolivia, and southwest of Brazil). Present in the understory at edges of dry forests, or associated with tropical plants.

Paraguay Sc#3058b. Issued 28 March 2017 in Set/6 featuring “Cactus and Wild Butterflies of Paraguay.” Printed by *Talleres de Valores Fiscales del Ministro de Hacienda*, Asunción.

***Pouteria campechiana***, SAPOTACEAE

Common name: Egg Fruit, Canistel

Synonyms: 32

Evergreen tree to 10 m with spreading crown. Leaves are thin and glossy 11–28 cm long and 4–7 cm wide. Fragrant flowers are bisexual, solitary, or in clusters January to June. Fruit is yellow, ovate or spindle-shaped maturing September to January. Native to southern Mexico and Central America. Cultivated for fruit.

Philippines Sc#3651. Popular Fruits of the Philippines definitives issued 14 March 2017. Designed by Rodine C. Teodoro. Printed by Litho Offset, Amstar Printing Company, Inc. Quantity 300,000 in sheets of 100.

***Rubus rosifolius***, ROSACEAE

Common names: Roseleaf Bramble, Mauritius Raspberry, Thimbleberry, Philippine Wild Raspberry

Synonyms: 14

Shrub with trailing glandular-hairy stems to 2 m long. Leaves pinnate with 5 or 7 leaflets. Flowers in short panicles or solitary in upper axils. Petals white, as long as, or shorter than the sepals. Fruit ovoid, about 20 mm long, red, edible with a distinct bitter-sour-sweet taste and a hairy receptacle. Native to rainforest and tall open forest of the Himalayas, East Asia, and eastern Australia.

Philippines Sc#3652. Popular Fruits of the Philippines definitives issued 14 March 2017. Quantity 500,000 in sheets of 100.

***Rollinia mucosa***, ANNONACEAE

Common name: Wild Sweet Sop, Wild Sugar Apple, Biriba

Synonyms: *Rollinia deliciosa* and 21 others

Tree 4–15 m with deciduous oblong-ovate leaves 10–25 cm long. Cultivated for its edible fruits. The fruit is large, conical, green when unripe, ripening to yellow. Its surface is covered with soft spines which bruise and blacken when handling. The fruit pulp is very soft and sweet, tasting somewhat like a lemon meringue pie. Native to the Brazilian-Peruvian Amazon at elevations 150–600 m.

Philippines Sc#3714. Popular Fruits of the Philippines definitives issued 14 March 2017. Quantity 3,300,000 in sheets of 100.



Begonia gutierrezii, BEGONIACEAE

New species described in 2010. Endemic to southern Palawan at quite low altitudes. This species occurs within the Lipuun Point Reservation, but is currently only known from two collections. Instantly distinct as the only species known from the island with peltate leaves. Native range is Philippines.

Philippines Sc#3741b. Issued 16 October 2017, for Endemic Flowers of the Philippines. Designer: Ma. Aimee Cabingao. Final Artist: Victorino Z. Serevo. Printed in se-tenant blocks of four in Litho Offset by Amstar Printing Company, Inc. Quezon City with quantity of 25,600.

***Opuntia aciculata***, CACTACEAE

Common name: Chenille Pricklypear

Synonyms: *O. engelmannii* ssp. *aciculata*, *O. engelmannii* var. *aciculata*, *O. engelmannii* var. *flexospina*, *O. flexospina*, *O. lendheimeri* var. *aciculata*, *O. strigii* var. *flexospina*

Shrub to 1.2 m. Green flattened succulent stems. Areoles on the circular or oval pads have prominent clusters of loosely attached brown glochids, on the pad surface and especially along the edges. Spines are mostly absent. Flowers orange or deep red to 30 mm. Fruit purplish red, ovoid, 30×17 mm. Found on dry hills mainly on stony outcrops, often in small colonies usually to the exclusion of other plants. Widespread in southern North America, to the Isthmus of Panama.

Romania Sc#5996. Issued 15 September 2017, in Set/4. Designed by Alec Bartos. Printed in offset using four colors by Fabrica de Timbre, Bucharest

***Coryphantha sulcata***, CACTACEAE

Common name: Pineapple Cactus

Synonyms: *C. calcarata*, *C. radians* var. *sulcata*, *C. roederiana*, *C. speciosa*, *C. sulcata* var. *sulcata*, *Mammillaria radians* var. *sulcata*, *M. sulcata*

Plants unbranched to freely branched and forming clumps 30–50 cm in diameter. Relatively smooth except for protruding abaxial central spine. Stems spheric or obovoid, 4–8 × 6–8 cm. Flowers yellow apical 40–60 × 35–55 mm in late spring to summer. Occurs in sandy or gravelly soil in valleys, grasslands, and thickets. Found in Mexican states of Coahuila, Nuevo León, and Tamaulipas and in United States in Texas, at elevations below 150 m.

Romania Sc#5997. Issued 15 September 2017, in Set/4.

***Echinocactus horizonthalonius***, CACTACEAE

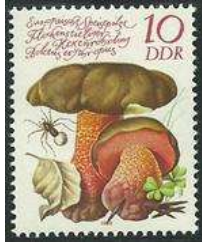
Common names: Devilshead, Blue Barrel Cactus

Synonyms: 15

Pale, grey-green to bright glaucous grey-blue, flat-topped or hemispheric, and deep-seated in substrate. Spherical with age or stoutly short cylindrical. Stem slowly growing up to 30 cm tall, 15–20 cm in diameter. Flowers: Pinkish-red, 5–7 cm in diameter, appear end of March to late May. Fruit: Red or pink, oblong, fleshy or semi-dry, and ephemeral. Grows in semi-desert, in xerophilous scrub, on several types of substrates. Occurs on limestone soils of rocky hills in the desert. Native to the southwestern United States and northern Mexico, where it occurs in Chihuahuan Desert and Sonoran Desert habitats.

Romania Sc#5998. Issued 15 September 2017, in Set/4.



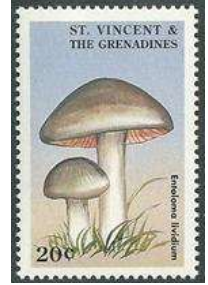


FUNGI

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.]

GERMANY

2018 August 9 (Mushrooms) (Set/3)

B1144	70c+30c	Chanterelle, <i>Cantharellus cibarius</i>	Cantharellaceae	A
B1145	85c+40c	U/I Porcini, <i>Boletus</i> sp.	Boletaceae	U A
B1146	145c+55c	Bay Bolete, <i>Imleria badia</i>	Boletaceae	A

MALDIVIVE ISLANDS

2016 May 23 (Owls & Mushrooms) (MS/4 & SS/1)

3609a	22r	Field Mushroom (Meadow Mushroom), <i>Agaricus campestris</i>	Agaricaceae	B
3609b	22r	Common Morel (Morel, True Morel), <i>Morchella esculenta</i>	Morchellaceae	B
3609c	22r	Gypsy Mushroom; <i>Cortinarius caperatus</i>	Cortinariaceae	B
3609d	22r	Honey Fungus (Honey Mushroom), <i>Armillaria mellea</i>	Physalacriaceae	B
3618	SS 70r	False Chanterelle, <i>Hygrophorus aurantiaca</i>	Hygrophoropsidaceae	B
	Margin	LL: Candlestick Fungus, <i>Xylaria hypoxylon</i>	Xylariaceae	Z
		Bot: <i>Armillaria ostoyae</i> (Cap: <i>Armillaria solidipes</i>)	Physalacriaceae	Z

ROMANIA

2017 October 6 (Mushrooms) (Set/4, 4ea MS/5+label, SS/4)

6005	2.50l	Fly Agaric (Fly Amanita), <i>Amanita muscaria</i> (☠)	Amanitaceae	A
6005a		MS/5+label (Sc#6005)		
6006	4.45l	Blusher, <i>Amanita rubescens</i>	Amanitaceae	A
6006a		MS/5+label (Sc#6006)		
6007	8l	Red-capped Scaber Stalk, <i>Leccinum aurantiacum</i>	Boletaceae	A
6007a		MS/5+label (Sc#6007)		
6008	15l	Parasol Mushroom, <i>Macrolepiota procera</i>	Agaricaceae	A
6008a		MS/5+label (Sc#6008)		
Note		SS/4 (Sc#6005–08) (unlisted—printed in limited quantities)		

SIERRA LEONE

2017 March 30 (Mushrooms) (MS/4 & SS/1)

4183a	9800le	Scarlet Elf Cup (Scarlet Elf Cap), <i>Sarcoscypha coccinea</i>	Sarcoscyphaceae	A
4183b	9800le	Dark Cap (Bronze Bolete), <i>Boletus aereus</i>	Boletaceae	A
4183c	9800le	(Earth Star), <i>Myriostoma coliforme</i>	Gastraceae	A
4183d	9800le	Smooth Chanterelle, <i>Cantharellus lateritius</i>	Cantharellaceae	A
4183	Margin	UL: <i>Morchella</i> sp.	Morchellaceae	U Z
		UR: <i>Boletus</i> sp.	Boletaceae	U Z
4204	SS 40000le	Netted Rhodotus (Rosy Vein Cap), <i>Rhodotus palmatus</i>	Physalacriaceae	A
	Margin	UL: <i>Morchella</i> sp.	Morchellaceae	U Z
		UR: <i>Boletus</i> sp.	Boletaceae	U Z
		LL: Amethyst Deceiver, <i>Laccaria amethystina</i>	Hydnangiaceae	Z
		LR: Latticed Stinkhorn (Basket Stinkhorn), <i>Clathrus ruber</i>	Phallaceae	Z

2017 June 30 (Mushrooms) (MS/4 & SS/1)

4359a	9800le	Petticoat Mottlegill, <i>Panaeolus papilionaceus</i>	Bolbitiaceae	A
		(Syn: <i>P. campanulatus</i> , <i>P. retirugis</i> , <i>P. sphinctrinus</i>)		

SIERRA LEONE (continued)

4359b	9800le	Panther Cap (False Blusher), <i>Amanita pantherina</i> (☞)	Amanitaceae	A
4359c	9800le	no common name, <i>Cortinarius archeri</i>	Cortinariaceae	A
4359d	9800le	no common name, <i>Psilocybe aztecorum</i>	Hymenogastraceae	A
4379	SS 40000le	Death Cap, <i>Amanita phalloides</i> (☞)	Amanitaceae	A
	Margin	LL: Pixie's Parasol, <i>Mycena interrupta</i>	Mycenaceae	Z
		R: Fly Agaric (Fly Amanita), <i>Amanita muscaria</i> (☞)	Amanitaceae	Z

2017 September 29 (Mushrooms) (MS/4 & SS/1)

4477a	9800le	Golden Chanterelle, <i>Cantharellus cibarius</i>	Cantharellaceae	A
4477b	9800le	Black Morel, <i>Morchella elata</i>	Morchellaceae	A
4477c	9800le	Death Cap, <i>Amanita phalloides</i> (☞)	Amanitaceae	A
4477d	9800le	Bay Bolete, <i>Imleria badia</i> (Cap: <i>Boletus badius</i>)	Boletaceae	A
4477	Margin	LL: no common name, <i>Gyromitra esculenta</i> (☞)	Discinaceae	Z
		Bot: Blusher, <i>Amanita rubescens</i>	Amanitaceae	Z
		LR: Sickener (Emetic Russula), <i>Russula emetica</i> (☞)	Russulaceae	Z
4497	SS 40000le	Plums & Custard (Red-haired Agaric), <i>Tricholomopsis rutilans</i>	Tricholomataceae	A
	Margin	LL: Indigo Milkcap, <i>Lactarius indigo</i>	Russulaceae	Z
		Bot: Beautiful Clavaria (Pink Coral Fungus), <i>Ramaria formosa</i>	Gomphaceae	Z
		LR: Netted Rhodotus (Rosy Vein Cap), <i>Rhodotus palmatus</i>	Physalacriaceae	Z

SWITZERLAND**2018 September 6** (Fairy Tale Characters) (Set/2)

Both stamps were released in MS with additional stylized mushrooms shown in the margins.

1689	100c	Stylized mushrooms (LR) (Red Riding Hood)		C S
1690	100c	Stylized mushrooms (LL) (Puss-in-Boots)		C S

Mycologist**SIERRA LEONE****2017 November 30** (Inventors) (MS/4)

4551c	9800le	Penicillin, <i>Penicillium chrysogenum</i> (w/ Alexander Fleming)	Trichocomaceae	B
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Lichen**FRANCE****2018 January 5** (Nature Photographs) (Bklt/12)

5363	(95c)	U/I Lichen covering rock		U B
5368a		Bklt/12 (Sc#5357-68)		



MAMMALIA

Editor

Michael Prince, LM68



New Listings

Scott#	Denom	Common Name/Scientific Name	Family/Subfamily	Code
ARMENIA 2017 December 29 (Flora & Fauna) (Set/2)				
1133	330d	Stoat (Ermine), <i>Mustela erminea</i>	Mustelidae	A
AUSTRALIAN ANTARCTIC TERR. 2018 March 27 (Seals) (SS/4)				
L215	\$1	Crabeater Seal, <i>Lobodon carcinophagus</i> (two seals)	Phocidae	A
L216	\$1	Same species (in water)	Phocidae	A
L217	\$2	Same species (two seals)	Phocidae	A
L218	\$2	Same species (one seal)	Phocidae	A
L218a		SS/4 (Sc#L215–18)		
AUSTRIA 2017 September 25 (Dachstein Mountains) (Coil) (s/a)				
2696	250c	Alpine Ibex, <i>Capra ibex</i>	Bovidae	A
2017 October 14 (Deer) (Single)				
2700	250c	Red Deer (Elk), <i>Cervus elaphus</i>	Cervidae	A
AZERBAIJAN 2017 December 6 (Fauna) (MS/8 & 2ea SS/1)				
1155a	20g	Domestic Horse, <i>Equus caballus</i>	Equidae	A
1155b	20g	Grey Wolf, <i>Canis lupus</i>	Canidae	A
1155c	20g	Brown Bear, <i>Ursus arctos</i>	Ursidae	A
1155d	20g	Goitered Gazelle, <i>Gazella subgutturosa</i>	Bovidae	A
1155g	20g	Caspian Seal, <i>Pusa caspica</i>	Phocidae	A
1155h	20g	Persian Leopard, <i>Panthera pardus</i> ssp. <i>ciscaucasica</i>	Felidae	A
1156	SS 50g	Goitered Gazelle, <i>Gazella subgutturosa</i>	Bovidae	A
BELGIUM 2017 October 23 (Flora & Fauna High Fens Nature Reserve) (MS/10)				
2834d	(74c)	European Pine Marten, <i>Martes martes</i>	Mustelidae	A
2834e	(74c)	Wild Cat, <i>Felis silvestris</i>	Felidae	A
2018 March 12 (Animal Tracks) (MS/5)				
2854a	(€1.48)	Eurasian Red Squirrel, <i>Sciurus vulgaris</i> (track print)	Sciuridae	R
2854b	(€1.48)	Red Fox, <i>Vulpes vulpes</i> (track print)	Canidae	R
2854c	(€1.48)	Western Roe Deer, <i>Capreolus capreolus</i> (track print)	Cervidae	R
2854d	(€1.48)	Wild Boar, <i>Sus scrofa</i> (track print)	Suidae	R
2854e	(€1.48)	Beech Marten, <i>Martes foina</i> (track print)	Mustelidae	R
2854	Margin	LL: Red Fox, <i>Vulpes vulpes</i>	Canidae	Z
		Bot: Eurasian Red Squirrel, <i>Sciurus vulgaris</i>	Sciuridae	Z
		Bot: Western Roe Deer, <i>Capreolus capreolus</i>	Cervidae	Z
		Bot: Beech Marten, <i>Martes foina</i>	Mustelidae	Z
		LR: Wild Boar, <i>Sus scrofa</i>	Suidae	Z
BOSNIA & HERZEGOVINA (Croat) 2017 November 1 (Chamois) (WWF) (Block/4)				
364a	1.50m	Alpine Chamois, <i>Rupicapra rupicapra</i> ssp. <i>balcanica</i> (one)	Bovidae	A
364b	1.50m	Same species (two facing R)	Bovidae	A
364c	1.50m	Same species (two heads)	Bovidae	A
364d	1.50m	Same species (one w/orange coat)	Bovidae	A

BOSNIA & HERZEGOVINA (Serb) 2017 November 9 (Endangered Animals) (MS/4)

584a	90pf	Brown Bear, <i>Ursus arctos</i>	Ursidae	A
584b	90pf	Eurasian Lynx, <i>Lynx lynx</i>	Felidae	A
584c	1.70m	Brown Bear, <i>Ursus arctos</i>	Ursidae	A
584d	1.70m	Eurasian Lynx, <i>Lynx lynx</i>	Felidae	A

DJIBOUTI**2018 March 15** (Fauna) (MS/4 & SS/1)

1391a	240fr	Polar Bear, <i>Ursus maritimus</i> (leaping)	Ursidae	A
1391b	240fr	Same species (two adults)	Ursidae	A
1391c	240fr	Same species (two cubs)	Ursidae	A
1391d	240fr	Same species (swimming)	Ursidae	A
1409	SS 950fr	Polar Bear, <i>Ursus maritimus</i> (also in R margin)	Ursidae	A Z
1392a	240fr	Giant Panda, <i>Ailuropoda melanoleuca</i> (eating in forest)	Ursidae	A
1392b	240fr	Same species (walking)	Ursidae	A
1392c	240fr	Same species (rolling on back)	Ursidae	A
1392d	240fr	Same species (eating on hillside)	Ursidae	A
1410	SS 950fr	Giant Panda, <i>Ailuropoda melanoleuca</i> (also LL & LR margin)	Ursidae	A Z
1393a	240fr	Jungle Cat, <i>Felis chaus</i>	Felidae	A
1393b	240fr	Puma, <i>Puma concolor</i>	Felidae	A
1393c	240fr	Asiatic Golden Cat, <i>Catopuma temminckii</i>	Felidae	A
1393d	240fr	Caracal, <i>Caracal caracal</i>	Felidae	A
1411	SS 950fr	Sand Cat, <i>Felis margarita</i> (also in R margin)	Felidae	A Z
1394a	240fr	Pygmy Sperm Whale, <i>Kogia breviceps</i>	Physeteridae	A
1394b	240fr	True's Beaked Whale, <i>Mesoplodon mirus</i>	Ziphiidae	A
1394c	240fr	North Atlantic Right Whale, <i>Eubalaena glacialis</i>	Balaenidae	A
1394d	240fr	Bryde's Whale, <i>Balaenoptera brydei</i>	Balaenopteridae	A
1412	SS 950fr	Beluga, <i>Delphinapterus leucas</i>	Monodontidae	A
	Margin	Bot: Narwhal, <i>Monodon monoceros</i>	Monodontidae	Z

2018 June 12 (Dolphins) (MS/4 & SS/1)

1442a	240fr	Common Bottlenose Dolphin, <i>Tursiops truncatus</i> (facing up)	Delphinidae	A
1442b	240fr	Spinner Dolphin, <i>Stenella longirostris</i>	Delphinidae	A
1442c	240fr	Common Bottlenose Dolphin, <i>Tursiops truncatus</i> (facing L)	Delphinidae	A
1442d	240fr	Orca (Killer Whale), <i>Orcinus orca</i>	Delphinidae	A
1462	SS 950fr	Common Bottlenose Dolphin, <i>Tursiops truncatus</i>	Delphinidae	A
	Margin	R: Spinner Dolphin, <i>Stenella longirostris</i>	Delphinidae	Z

FALKLAND ISLANDS**2018 April 18** (Wildlife) (Set/4)

1219	£1.01	South American Sea Lion, <i>Otaria flavescens</i>	Otariidae	A
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GERMANY**2018 January 2** (Juvenile Animals) (Set/2)

3017	85c	Red Deer (Elk), <i>Cervus elaphus</i> (perf 13½×13¾)	Cervidae	A
3018	85c	Harbor Seal, <i>Phoca vitulina</i>	Phocidae	A

2018 April 12 (Juvenile Animals) (Bklt/10)

3019	85c	Red Deer (Elk), <i>Cervus elaphus</i> (die cut 9¾) (s/a)	Cervidae	A
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GREAT BRITAIN**2018 April 17** (Reintroduced Species) (3ea Horiz pair)

3717	£1.45	Eurasian Beaver, <i>Castor fiber</i>	Castoridae	A
3718a		Horiz pair (Sc#3717-18)		

MALDIVIVE ISLANDS**2015 August 10** (Wildlife Conservation & Rehabilitation) (MS/4 & SS/1)

3451a	20r	Brown Bear, <i>Ursus arctos</i> (standing looking L)	Ursidae	A
3451b	20r	Same species (standing on large rock)	Ursidae	A
3451c	20r	Same species (standing on small rock)	Ursidae	A
3451d	20r	Same species (sitting on haunches)	Ursidae	A

MALDIVE ISLANDS (continued)

3451	Margin	UR: Same species (sitting on globe)	Ursidae	Z
3461	SS 60r	Brown Bear, <i>Ursus arctos</i>	Ursidae	A
	Margin	UR: Same species (sitting on globe)	Ursidae	Z
		LL & LR: Same species	Ursidae	Z
3452a	20r	Giant Panda, <i>Ailuropoda melanoleuca</i> (sitting eating bamboo)	Ursidae	A
3452b	20r	Same species (standing)	Ursidae	A
3452c	20r	Same species (head eating bamboo)	Ursidae	A
3452d	20r	Same species (on stump)	Ursidae	A
3452	Margin	UR: Same species (sitting on globe)	Ursidae	Z
3462	SS 60r	Giant Panda, <i>Ailuropoda melanoleuca</i>	Ursidae	A
3451	Margin	UR: Same species (sitting on globe)	Ursidae	Z
		LL & R: Same species	Ursidae	Z
3453a	20r	Angolan Colobus, <i>Colobus angolensis</i> (head)	Cercopithecidae	A
3453b	20r	Zanzibar Red Colobus, <i>Piliocolobus kirkii</i>	Cercopithecidae	A
3453c	20r	Angolan Colobus, <i>Colobus angolensis</i> (adult & juvenile)	Cercopithecidae	A
3453d	20r	Mantled Guereza, <i>Colobus guereza</i>	Cercopithecidae	A
3452	Margin	UR: Angolan Colobus, <i>Colobus angolensis</i> (sitting on globe)	Cercopithecidae	Z
3463	SS 60r	Angolan Colobus, <i>Colobus angolensis</i>	Cercopithecidae	A
	Margin	UR: Same species (sitting on globe)	Cercopithecidae	Z
		Bot & R: Same species	Cercopithecidae	Z
3454a	20r	Asiatic Elephant, <i>Elephas maximus</i> ssp. <i>maximus</i>	Elephantidae	A
3454b	20r	Asiatic Elephant, <i>Elephas maximus</i> ssp. <i>indicus</i> (three)	Elephantidae	A
3454c	20r	Asiatic Elephant, <i>Elephas maximus</i> ssp. <i>indicus</i> (two)	Elephantidae	A
3454d	20r	Asiatic Elephant, <i>Elephas maximus</i> ssp. <i>sumatranus</i>	Elephantidae	A
3454	Margin	UR: Asiatic Elephant, <i>Elephas maximus</i> (sitting on globe)	Elephantidae	Z
3464	SS 60r	Asiatic Elephant, <i>Elephas maximus</i> ssp. <i>indicus</i>	Elephantidae	A
	Margin	UR: Asiatic Elephant, <i>Elephas maximus</i> (sitting on globe)	Elephantidae	Z
		Bot: Same species	Elephantidae	Z
3455a	20r	Spinner Dolphin, <i>Stenella longirostris</i>	Delphinidae	A
3455b	20r	Fraser's Dolphin, <i>Lagenorhynchus hosei</i>	Delphinidae	A
3455c	20r	Striped Dolphin, <i>Stenella coeruleoalba</i>	Delphinidae	A
3455d	20r	Pantropical Spotted Dolphin, <i>Stenella attenuata</i>	Delphinidae	A
3455	Margin	UR: Fraser's Dolphin, <i>Lagenorhynchus hosei</i> (on globe)	Delphinidae	Z
3465	SS 60r	Indo-Pacific Bottlenose Dolphin, <i>Tursiops aduncus</i>	Delphinidae	A
	Margin	UR: Fraser's Dolphin, <i>Lagenorhynchus hosei</i> (on globe)	Delphinidae	Z
		Bot: Common Bottlenose Dolphin, <i>Tursiops truncatus</i>	Delphinidae	Z
3456a	22r	Puma, <i>Puma concolor</i> (adult & juvenile)	Felidae	A
3456b	22r	Jaguar, <i>Panthera onca</i> (one animal)	Felidae	A
3456c	22r	Jaguar, <i>Panthera onca</i> (adult & juvenile)	Felidae	A
3456d	22r	Puma, <i>Puma concolor</i> (in tree)	Felidae	A
3456	Margin	Jaguar, <i>Panthera onca</i> (on globe)	Felidae	Z
3466	SS 70r	Jaguar, <i>Panthera onca</i> (also UR & LL margin)	Felidae	A Z
	Margin	R: Puma, <i>Puma concolor</i>	Felidae	Z
3457a	22r	South African Fur Seal, <i>Arctocephalus pusillus</i> (one seal)	Otariidae	A
3457b	22r	Same species (two facing front)	Otariidae	A
3457c	22r	Same species (adult & juvenile)	Otariidae	A
3457d	22r	Same species (two facing L)	Otariidae	A
3457	Margin	UR: Same species (w/ globe)	Otariidae	Z
3467	SS 70r	South African Fur Seal, <i>Arctocephalus pusillus</i>	Otariidae	A
	Margin	UR: Same species (w/ globe)	Otariidae	Z
		Bot & R: Same species	Otariidae	Z

MALDIVE ISLANDS (continued) 2016 May 23 (Flora & Fauna) (MS/4 & SS/1)

3603a	20r	Tiger, <i>Panthera tigris</i> ssp. <i>tigris</i>	Felidae	A
3603b	20r	Puma, <i>Puma concolor</i> ssp. <i>cougar</i>	Felidae	A
3603c	20r	Cheetah, <i>Acinonyx jubatus</i> ssp. <i>jubatus</i> (Cap: <i>A. j. raineyii</i>)	Felidae	A
3603d	20r	Central American Jaguar, <i>Panthera onca</i> ssp. <i>centralis</i>	Felidae	A
3612	SS 60r	Lion, <i>Panthera leo</i> ssp. <i>leo</i>	Felidae	A
	Margin	L: Tiger, <i>Panthera tigris</i> ssp. <i>amoyensis</i>	Felidae	Z
		LR: Leopard, <i>Panthera pardus</i> ssp. <i>orientalis</i>	Felidae	Z
		UR: Snow Leopard, <i>Panthera uncia</i>	Felidae	Z
3605a	20r	Atlantic Spotted Dolphin, <i>Stenella frontalis</i>	Delphinidae	A
3605b	20r	Short-beaked Common Dolphin, <i>Delphinus delphis</i>	Delphinidae	A
3605c	20r	Commerson's Dolphin, <i>Cephalorhynchus commersonii</i>	Delphinidae	A
3605d	20r	Striped Dolphin, <i>Stenella coeruleoalba</i>	Delphinidae	A
3614	SS 60r	Amazon River Dolphin, <i>Inia geoffrensis</i>	Iniidae	A
	Margin	L: Rough-toothed Dolphin, <i>Steno bredanensis</i>	Delphinidae	Z
		R: Ganges River Dolphin, <i>Platanista gangetica</i>	Platanistidae	Z
		Bot: Risso's Dolphin, <i>Grampus griseus</i>	Delphinidae	Z
3608a	22r	Polar Bear, <i>Ursus maritimus</i> (sitting facing front)	Ursidae	A
3608b	22r	Same species (standing)	Ursidae	A
3608c	22r	Same species (sitting facing R)	Ursidae	A
3608d	22r	Same species (head)	Ursidae	A
3617	SS 70r	Polar Bear, <i>Ursus maritimus</i> (also on margin)	Ursidae	A Z

SIERRA LEONE 2017 March 30 (Fauna & Flora) (MS/4 & SS/1)

4167a	9800le	Red Panda <i>Ailurus fulgens</i> (facing R)	Ailuridae	A
4167b	9800le	Giant Panda, <i>Ailuropoda melanoleuca</i> (two on ground)	Ursidae	A
4167c	9800le	Giant Panda, <i>Ailuropoda melanoleuca</i> (two in tree)	Ursidae	A
4167d	9800le	Red Panda, <i>Ailurus fulgens</i> (facing L)	Ailuridae	A
4167	Margin	UL & LR: Giant Panda, <i>Ailuropoda melanoleuca</i>	Ursidae	Z
4186	SS 40000le	Giant Panda, <i>Ailuropoda melanoleuca</i>	Ursidae	A
	Margin	UR & Bot: Same species	Ursidae	Z
		UL: Red Panda, <i>Ailurus fulgens</i>	Ailuridae	Z
4168a	9800le	Lion, <i>Panthera leo</i> (lying on rock)	Felidae	A
4168b	9800le	Lion, <i>Panthera leo</i>	Felidae	B
		African Buffalo, <i>Syncerus caffer</i>	Bovidae	B
4168c	9800le	Lion, <i>Panthera leo</i> (two adults)	Felidae	A
4168d	9800le	Lion, <i>Panthera leo</i> (running)	Felidae	A
4168	Margin	Same species	Felidae	Z
4187	SS 40000le	Lion, <i>Panthera leo</i> (also on margin)	Felidae	Z
	Margin	LL: Dorcas Gazelle, <i>Gazella dorcas</i>	Bovidae	A Z
4169a	9800le	Indochinese Tiger, <i>Panthera tigris</i> ssp. <i>corbetti</i>	Felidae	A
4169b	9800le	Bengal Tiger, <i>Panthera tigris</i> ssp. <i>tigris</i>	Felidae	A
4169c	9800le	Malayan Tiger, <i>Panthera tigris</i> ssp. <i>jacksoni</i>	Felidae	A
4169d	9800le	Siberian Tiger, <i>Panthera tigris</i> ssp. <i>altaica</i>	Felidae	A
4169	Margin	Tiger, <i>Panthera tigris</i>	Felidae	Z
4188	SS 40000le	Bengal Tiger, <i>Panthera tigris</i> ssp. <i>tigris</i>	Felidae	A
	Margin	LR: Same species	Felidae	Z
		LL: Siberian Tiger, <i>Panthera tigris</i> ssp. <i>altaica</i>	Felidae	Z
4181b	9800le	Muskox, <i>Ovibos moschatus</i>	Bovidae	A
4181c	9800le	Walrus, <i>Odobenus rosmarus</i>	Odobenidae	A
4181	Margin	UL & UR: Polar Bear, <i>Ursus maritimus</i>	Ursidae	Z
4200	SS 40000le	Polar Bear, <i>Ursus maritimus</i> (also on margin)	Ursidae	A Z

SIERRA LEONE (continued)		2017 March 30 (Endemic Indonesian Animals) (MS/4 & SS/2) (round)		
4205b	9800le	Javan Rhinoceros, <i>Rhinoceros sondaicus</i>	Rhinocerotidae	A
4205c	9800le	Sumatran Tiger, <i>Panthera tigris</i> ssp. <i>sumatrae</i>	Felidae	A
4205d	9800le	Sumatran Muntjac, <i>Muntiacus montanus</i>	Cervidae	(new) A
4206b	SS 20000le	Mountain Anoa, <i>Bubalus quarlesi</i>	Bovidae	(new) A
2017 May 30 (Jacques-Yves Cousteau [1917–1997]) (Set/4 & SS/1)				
4329	6600le	Common Bottlenose Dolphin, <i>Tursiops truncatus</i>	Delphinidae	B
4330	SS 40000le	Atlantic Spotted Dolphin, <i>Stenella frontalis</i>	Delphinidae	B
2017 May 30 (Steve Irwin [1962–2006]) (Set/4 & SS/1)				
4333	6600le	Agile Wallaby, <i>Macropus agilis</i>	Macropodidae	(new) B
4335	SS 40000le	Irwin w/ Pinta Island Tortoise, <i>Chelonoidis nigra</i> ssp. <i>abingdonii</i>	Testudinidae	R
	Margin	LL: Southern Hairy-nosed Wombat, <i>Lasiorhinus latifrons</i>	Vombatidae	Z
2017 June 30 (Fauna & Flora) (MS/4 & SS/1)				
4341a	9800le	Dugong, <i>Dugong dugon</i> (one facing R)	Dugongidae	A
4341b	9800le	Same species (adult & juvenile)	Dugongidae	A
4341c	9800le	Same species (two facing front)	Dugongidae	A
4341d	9800le	Same species (two facing L)	Dugongidae	A
4361	SS 40000le	Dugong, <i>Dugong dugon</i> (also R & Bot margin)	Dugongidae	A Z
4342a	9800le	Heaviside's Dolphin, <i>Cephalorhynchus heavisidii</i>	Delphinidae	A
4342b	9800le	Commerson's Dolphin, <i>Cephalorhynchus commersonii</i>	Delphinidae	A
4342c	9800le	Indo-Pacific Bottlenose Dolphin, <i>Tursiops aduncus</i>	Delphinidae	A
4342d	9800le	Top: Pacific White-sided Dolphin, <i>Lagenorhynchus obliquidens</i>	Delphinidae	B
		Bot: White-beaked Dolphin, <i>Lagenorhynchus albirostris</i>	Delphinidae	B
4362	SS 40000le	Atlantic Spotted Dolphin, <i>Stenella frontalis</i>	Delphinidae	A
	Margin	Bot: Common Bottlenose Dolphin, <i>Tursiops truncatus</i>	Delphinidae	Z
		R: Burrunan Dolphin, <i>Tursiops australis</i>	Delphinidae	Z
4343a	9800le	Sperm Whale, <i>Physeter catodon</i>	Physeteridae	A
4343b	9800le	Grey Whale, <i>Eschrichtius robustus</i>	Eschrichtiidae	A
4343c	9800le	Common Minke Whale, <i>Balaenoptera acutorostrata</i>	Balaenopteridae	A
4343d	9800le	Bowhead Whale, <i>Balaena mysticetus</i>	Balaenidae	A
4363	SS 40000le	Humpback Whale, <i>Megaptera novaeangliae</i> (also Bot margin)	Balaenopteridae	A Z
4344a	9800le	Leopard, <i>Panthera pardus</i>	Felidae	A
4344b	9800le	Tiger, <i>Panthera tigris</i>	Felidae	A
4344c	9800le	Cheetah, <i>Acinonyx jubatus</i>	Felidae	A
4344d	9800le	Jaguar, <i>Panthera onca</i>	Felidae	A
4364	SS 40000le	Puma, <i>Puma concolor</i>	Felidae	A
	Margin	R & Bot: Lion, <i>Panthera leo</i>	Felidae	Z
4356c	9800le	†Thylacine, <i>Thylacinus cynocephalus</i>	Thylacinidae	A
4356d	9800le	†Quagga, <i>Equus quagga</i> ssp. <i>quagga</i>	Equidae	A
2017 August 30 (Antarctica & Tourism) (MS/4 & SS/1)				
4432b	9800le	Weddell Seal, <i>Leptonychotes weddellii</i>	Phocidae	A
4432c	9800le	Orca (Killer Whale), <i>Orcinus orca</i>	Delphinidae	A
4432d	9800le	Southern Right Whale, <i>Eubalaena australis</i>	Balaenidae	A
4451	SS 40000le	Weddell Seal, <i>Leptonychotes weddellii</i>	Phocidae	A
4433a	9800le	Eastern Gorilla, <i>Gorilla beringei</i>	Hominidae	B
4433b	9800le	Bornean Orangutan, <i>Pongo pygmaeus</i>	Hominidae	B
4433c	9800le	Golden Monkey, <i>Cercopithecus kandti</i>	Cercopithecidae	B
4433d	9800le	Grivet Monkey, <i>Chlorocebus aethiops</i>	Cercopithecidae	B
4452	SS 40000le	Common Chimpanzee, <i>Pan troglodytes</i> (also UR margin)	Hominidae	B Z

SIERRA LEONE (continued)**2017 August 30** (Endangered Species of China) (MS/4 & SS/1)

4459b	9800le	Tiger, <i>Panthera tigris</i> ssp. <i>amoyensis</i> (drawing)	Felidae	S A
4459c	9800le	Yangtze River Dolphin, <i>Lipotes vexillifer</i> (drawing)	Iniidae	S A
4459d	9800le	Golden Snub-nosed Monkey, <i>Rhinopithecus roxellana</i> (drawing)	Cercopithecidae	S A
4460	SS 40000le	Giant Panda, <i>Ailuropoda melanoleuca</i> (drawing)	Ursidae	S A
	Margin	UL: Pere David's Deer, <i>Elaphurus davidianus</i> (drawing)	Cervidae	S Z

2017 September 29 (Fauna & Flora) (MS/4 & SS/1)

4461a	9800le	Harbor Seal, <i>Phoca vitulina</i>	Phocidae	A
4461b	9800le	Ribbon Seal, <i>Histiophoca fasciata</i>	Phocidae	A
4461c	9800le	Grey Seal, <i>Halichoerus grypus</i>	Phocidae	A
4461d	9800le	Bearded Seal, <i>Erignathus barbatus</i> (Cap: <i>Pagophilus groenlandicus</i>)	Phocidae	A
4461	Margin	Bot: Northern Elephant Seal, <i>Mirounga angustirostris</i>	Phocidae	Z
4481	SS 40000le	Northern Elephant Seal, <i>Mirounga angustirostris</i>	Phocidae	A
	Margin	Bot: Leopard Seal, <i>Hydrurga leptonyx</i>	Phocidae	Z
		Bot: Harbor Seal <i>Phoca vitulina</i>	Phocidae	Z
		Bot: Crabeater Seal, <i>Lobodon carcinophagus</i>	Phocidae	Z
4462a	9800le	Steller Sea Lion, <i>Eumetopias jubatus</i>	Otariidae	A
4462b	9800le	Australian Sea Lion, <i>Neophoca cinerea</i>	Otariidae	A
4462c	9800le	California Sea Lion, <i>Zalophus californianus</i>	Otariidae	A
4462d	9800le	New Zealand Fur Seal, <i>Arctocephalus forsteri</i>	Otariidae	A
4462	Margin	LL: California Sea Lion, <i>Zalophus californianus</i>	Otariidae	Z
		LR: Australian Sea Lion, <i>Neophoca cinerea</i>	Otariidae	Z
4482	SS 40000le	Galapagos Sea Lion, <i>Zalophus wollebaeki</i>	Otariidae	A
	Margin	LL: California Sea Lion, <i>Zalophus californianus</i>	Otariidae	Z
		LR: Galapagos Sea Lion, <i>Zalophus wollebaeki</i>	Otariidae	Z
4463a	9800le	Striped Dolphin, <i>Stenella coeruleoalba</i>	Delphinidae	A
4463b	9800le	Common Bottlenose Dolphin, <i>Tursiops truncatus</i>	Delphinidae	A
4463c	9800le	Common Bottlenose Dolphin, <i>Tursiops truncatus</i> (Cap: <i>Cephalorhynchus commersonii</i>)	Delphinidae	A
4463d	9800le	Indo-Pacific Bottlenose Dolphin, <i>Tursiops aduncus</i>	Delphinidae	A
4463	Margin	Striped Dolphin, <i>Stenella coeruleoalba</i>	Delphinidae	Z
4483	SS 40000le	Long-beaked Common Dolphin, <i>Delphinus capensis</i> (Cap: <i>Orcaella brevirostris</i>)	Delphinidae	A
	Margin	Bot: Indo-Pacific Bottlenose Dolphin, <i>Tursiops aduncus</i>	Delphinidae	Z
4474a	9800le	Bonobo (Pygmy Chimpanzee), <i>Pan paniscus</i>	Hominidae	A
4474b	9800le	Red Panda, <i>Ailurus fulgens</i>	Ailuridae	A
4474c	9800le	Proboscis Monkey, <i>Nasalis larvatus</i>	Cercopithecidae	A
4474	Margin	Bot: Spanish Lynx, <i>Lynx pardinus</i>	Felidae	Z
4494	SS 40000le	Malayan Tapir, <i>Tapirus indicus</i>	Tapiridae	A
4475b	9800le	Pygmy Hippopotamus, <i>Hexaprotodon liberiensis</i>	Hippopotamidae	A
4475c	9800le	Bongo, <i>Tragelaphus eurycerus</i>	Bovidae	A
4475d	9800le	Sooty Mangabey, <i>Cercocebus atys</i>	Cercopithecidae	A
4495	SS 40000le	Kingfisher on stamp		
	Margin	LL: Western Red Colobus, <i>Piliocolobus badius</i>	Cercopithecidae	A

2017 December 29 (Fauna) (MS/4 & SS/1)

4581a	9800le	Red River Hog, <i>Potamochoerus porcus</i> (nose on ground)	Suidae	A
4581b	9800le	Same species (facing front)	Suidae	A
4581c	9800le	Same species (facing L)	Suidae	A
4581d	9800le	Same species (facing R)	Suidae	A
4601	SS 40000le	Red River Hog, <i>Potamochoerus porcus</i> (also on margin)	Suidae	A Z

SIERRA LEONE (continued)

4582a	9800le	Striped Hyena, <i>Hyaena hyaena</i> (facing R)	Hyaenidae	A
4582b	9800le	Spotted Hyena, <i>Crocuta crocuta</i> (head raised)	Hyaenidae	A
4582c	9800le	Spotted Hyena, <i>Crocuta crocuta</i> (head lowered)	Hyaenidae	A
4582d	9800le	Striped Hyena, <i>Hyaena hyaena</i> (facing L)	Hyaenidae	A
4602	SS 40000le	Spotted Hyena, <i>Crocuta crocuta</i> (also on margin)	Hyaenidae	A Z
4583a	9800le	Hippopotamus, <i>Hippopotamus amphibius</i> (standing facing L)	Hippopotamidae	A
4583b	9800le	Same species (facing R)	Hippopotamidae	A
4583c	9800le	Same species (Swimming facing L)	Hippopotamidae	A
4583d	9800le	Same species (mouth open)	Hippopotamidae	A
4603	SS 40000le	Hippopotamus <i>Hippopotamus amphibius</i> (also on margin)	Hippopotamidae	A Z
4584a	9800le	Diana Monkey, <i>Cercopithecus diana</i>	Cercopithecidae	A
4584b	9800le	Olive Baboon, <i>Papio anubis</i>	Cercopithecidae	A
4584c	9800le	Common Chimpanzee, <i>Pan troglodytes</i> ssp. <i>verus</i>	Hominidae	A
4584d	9800le	Western Red Colobus, <i>Piliocolobus badius</i>	Cercopithecidae	A
4604	SS 40000le	Green Monkey, <i>Chlorocebus sabaeus</i>	Cercopithecidae	A
	Margin	LL: Guinea Baboon <i>Papio papio</i>	Cercopithecidae	Z
		Bot: Senegal Galago, <i>Galago senegalensis</i>	Galagidae	Z
		LR: Lesser Spot-nosed Monkey, <i>Cercopithecus petaurista</i>	Cercopithecidae	(new) Z
4585a	9800le	Gambian Epauletted Fruit Bat, <i>Epomophorus gambianus</i>	Pteropodidae	A
4585b	9800le	Seychelles Flying Fox, <i>Pteropus seychellensis</i>	Pteropodidae	A
4585c	9800le	Yellow-winged Bat, <i>Lavia frons</i>	Megadermatidae	A
4585d	9800le	Egyptian Rousette, <i>Rousettus aegyptiacus</i>	Pteropodidae	A
4605	SS 40000le	Large Flying Fox, <i>Pteropus vampyrus</i>	Pteropodidae	A
	Margin	UR: Schreibers's Long-fingered Bat, <i>Miniopterus schreibersi</i>	Vespertilionidae	Z
		LL: Mauritian Tomb Bat, <i>Taphozous mauritanus</i>	Emballonuridae	Z
4586a	9800le	Leopard, <i>Panthera pardus</i> ssp. <i>pardus</i> (w/ prey)	Felidae	A
4586b	9800le	Same species (facing front)	Felidae	A
4586c	9800le	Same species (crouching)	Felidae	A
4586d	9800le	Same species (facing L)	Felidae	A
4606	SS 40000le	Leopard, <i>Panthera pardus</i> ssp. <i>pardus</i> (also on margin)	Felidae	A Z
4587a	9800le	African Bush Elephant, <i>Loxodonta africana</i> (facing R)	Elephantidae	A
4587b	9800le	Same species (facing front)	Elephantidae	A
4587c	9800le	Same species (four animals)	Elephantidae	A
4587d	9800le	Same species (facing L)	Elephantidae	A
4607	SS 40000le	African Bush Elephant, <i>Loxodonta africana</i> (also on margin)	Elephantidae	A Z
4588a	9800le	African Manatee, <i>Trichechus senegalensis</i> (facing LL)	Trichechidae	A
4588b	9800le	Same species (facing UR)	Trichechidae	A
4588c	9800le	Same species (facing R)	Trichechidae	A
4588d	9800le	Same species (facing L)	Trichechidae	A
4608	SS 40000le	African Manatee, <i>Trichechus senegalensis</i> (also on margin)	Trichechidae	A Z
4589a	9800le	Spinner Dolphin, <i>Stenella longirostris</i> (Cap: <i>Stenella frontalis</i>)	Delphinidae	A
4589b	9800le	Atlantic Humpbacked Dolphin, <i>Sousa teuszii</i>	Delphinidae	A
4589c	9800le	Fraser's Dolphin, <i>Lagenodelphis hosei</i>	Delphinidae	A
4589d	9800le	Pygmy Killer Whale, <i>Feresa attenuata</i>	Delphinidae	A
4609	SS 40000le	Indo-Pacific Bottlenose Dolphin, <i>Tursiops aduncus</i> (margin) (Cap: <i>Stenella frontalis</i>)	Delphinidae	A Z
4590a	9800le	Orca (Killer Whale), <i>Orcinus orca</i> (facing LR)	Delphinidae	A
4590b	9800le	Same species (two whales)	Delphinidae	A
4590c	9800le	Same species (facing R)	Delphinidae	A
4590d	9800le	Same species (facing UL)	Delphinidae	A

SIERRA LEONE (continued)

4610 SS 40000le Orca (Killer Whale), *Orcinus orca* (also on margin) Delphinidae A Z

WALLIS & FUTUNA ISLANDS 2017 June 7 (World Environment Day) (Single)

787 400fr Humpback Whale, *Megaptera novaeangliae* Balaenopteridae A

SANTA'S REINDEER

(from Patricia Edmonds, *National Geographic*) “Rudolph the red-nosed reindeer must have been a female.”

Rangifer tarandus includes the caribou of North America and the reindeer of Eurasia. Biologist Peter Flood of the University of Saskatchewan, Canada, says it is the only deer species in which both sexes grow antlers—and in which annual rack-shedding cycles separate the bulls from the cows.

In spring, both sexes begin to grow antlers that, by fall, harden to bone. Flood says adult males' antlers are rightly called weapons of sex, used to drive off other bulls in rut. After the cows are pregnant, adult bulls' testosterone levels drop, triggering a bone cell change that makes their antlers fall off, usually in November or December.

Young males keep their antlers somewhat longer. But pregnant cows keep their racks all winter and into spring, the better to fend off threats and guard feeding sites. Only after they give birth, typically in April or May, do they shed their antlers (which non-pregnant cows did some weeks earlier).

So to give Santa's sleigh pullers their due, let us clarify. Reindeer still antlered on Christmas Eve may be adolescent males, but could very well be females, and pregnant ones at that.

[*Ed. note. The names of Santa's main team have been documented for almost 200 years. Clearly they cannot be adolescents. One of the names (Vixen) is feminine and the others are androgynous enough to give credence to this theory that they are all female.*

[*However, Rudolph is clearly a masculine name and is referred to as a male in the story that introduced him to the public in 1939. Since Rudolph has been around that long, we can consider that by now he also is no longer a young bull and thus, should have shed his antlers by Christmas Eve.*

[*If we suppose that all these beasts are the original members of the team, then they have unnaturally long life spans. Given that they can also fly, perhaps they belong to an unidentified supernatural subspecies (R. t. fantasticus?). Maybe this subspecies does not shed its antlers at all, so who knows what gender they might be.*]



Rangifer tarandus
Iceland, 2003. Sc#999



ORNITHOLOGY

Editor

Glenn G. Mertz, BU1455

Corrections/Updates



BULGARIA, Vol. 67(2), p.123

Update: I wrote this issue up in Vol. 67(3), with Sc#4825a–d. Scott has renumbered this set of four as Sc#4825–28, and listed Sc#4828a–d as a MS/4. Sc#4825–28 is a set without a light gray frame.

DJIBOUTI, Vol. 67(3), p.213, with date of 2018 March 15.

Update: Owls (MS/4=Sc#1395a–d, SS/1=Sc#1413)

Birds of Prey (MS/4=Sc#1396a–d, SS/1=Sc#1414)

Alexander Wilson (MS/4=Sc#1400a–d, SS/1=Sc#1418)

GAMBIA, Vol. 66(2), p.142

Correction: Sc#3614b was missing the full scientific name. It is *Milvus milvus*

MALDIVIVE ISLANDS, Vol. 65(2), pp.116–17

Update: Scott Publishing has assigned numbers to the following issues. I have listed them below in the order I listed them in Vol. 65(2), starting on p.116. For those using Scott numbers, you will have to replace the Michel numbers inserted by the journal editor.

2015 August 10 (Conservation Projects: Penguins) (MS/4=Sc#3458a–d, SS/1=Sc#3468)

2015 December 2 (BAA Atoll) (MS/4=Sc#3511b)

2015 December 2 (Ducks) (MS/4=Sc#3513a–d; SS/1=Sc#3523)

2015 December 2 (Birds of Prey) (MS/4=Sc#3512a–d; SS/1=Sc#3522)

2015 December 2 (Wading Birds) (MS/4=Sc#3519a–d; SS/1=Sc#3529)

2015 December 2 (Seabirds) (MS/4=Sc#3517a–d; SS/1=3527)

2015 December 2 (Terns) (MS/4=Sc#3518a–d; SS/1=Sc#3528)

OMAN, Vol. 66(3), p.132

Update: Scott has assigned numbers to the issues of 2014 December 14. They are in the order I listed them, Sc#568a, Sc#568b, and the five SS are Sc#569–73.

PAPUA NEW GUINEA, Vol. 67(3), p.39

Correction: Sc#1879b, denomination 1.50k, was incorrectly listed as a Yellow-legged Eagle. It was captioned on the stamp as a Black-billed Brushturkey, and this is how it should have been listed in the write-up. The scientific name *Talegalla fuscirostris* listed in the write-up is correct and was printed correctly on the stamp.

New Issues

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

2018 April 24 (Personalized) (Set/4)

A

A set of four stamps (Sc#587–90) listed by Scott Publishing as “Personalized Stamps,” meaning purchasers can place any image in the vignette portion of the stamp. They go on to state that the vignettes shown for these types are generic images. Only one image features a bird.

587	1.30c	Burrowing Owl, <i>Athene cunicularia</i>	Strigidae	
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AUSTRALIA		2018 March 3 (Finches of Australia) (Set/4, Strip/4, Bklt/10)	A
4771	\$1	Blue-faced Parrotfinch, <i>Erythrura trichroa</i>	Estrildidae
4772	\$1	Double-barred Finch, <i>Taeniopygia bichenovii</i>	Estrildidae
4773	\$1	Star Finch, <i>Neochmia ruficauda</i>	Estrildidae
4774	\$1	Chestnut-eared Finch, <i>Taeniopygia castanotis</i>	Estrildidae
		(Cap: Zebra Finch, <i>Taeniopygia guttata</i> (this species has been lumped))	
4775	\$1	Blue-faced Parrotfinch, <i>Erythrura trichroa</i> (die cut) (s/a)	Estrildidae
4776	\$1	Double-barred Finch, <i>Taeniopygia bichenovii</i> (die cut) (s/a)	Estrildidae
4777	\$1	Star Finch, <i>Neochmia ruficauda</i> (die cut) (s/a)	Estrildidae
4778	\$1	Chestnut-eared Finch, <i>Taeniopygia castanotis</i> (die cut) (s/a)	Estrildidae
4778a		Horiz coil Strip/4 (Sc#4775–78)	
4778b		Bklt/10 (3ea Sc#4775–76, 2ea Sc#4777–78)	
		2018 May 21 (Silo Art) (4ea Bklt/4 & 4ea Bklt/10)	C
4804	\$1	New Holland Honeyeater, <i>Phylidonyris novaehollandiae</i>	Meliphagidae
4804a		Bklt/4 (2ea Sc#4803–04) (perf 14×14¾)	(new)
4805	\$1	Pale-headed Rosella, <i>Platycercus adscitus</i>	Psittaculidae
4805a		Bklt/4 (2ea Sc#4803 & Sc#4805) (perf 14×14¾)	
4806a		Bklt/4 (Sc#4803–06) (perf 14×14¾)	
4806b		Bklt/4 (2ea Sc#4804 & Sc#4806) (perf 14×14¾)	
4808	\$1	New Holland Honeyeater, <i>Phylidonyris novaehollandiae</i>	Meliphagidae
4808a		Bklt/10 (Sc#4808) (die cut 11¼) (s/a)	
4809	\$1	Pale-headed Rosella, <i>Platycercus adscitus</i>	Psittaculidae
4809a		Bklt/10 (Sc#4809) (die cut 11¼) (s/a)	
		2018 June 5 (Finches of Australia) (SS/3)	A
4811	\$1	Gouldian Finch, <i>Erythrura gouldiae</i>	Estrildidae
4812	\$1	Beautiful Firetail, <i>Stagonopleura bella</i>	Estrildidae
4813	\$1	Black-throated Finch, <i>Poephila cincta</i>	Estrildidae
4813a		SS/3 (Sc#4811–13)	Vol. 67(3) Vol. 67(3)
AZERBAIJAN		2017 December 6 (Fauna) (MS/8 & 2ea SS/1)	A
1155e	20g	Golden Eagle, <i>Aquila chrysaetos</i>	Accipitridae
1155f	20g	Greater Flamingo, <i>Phoenicopterus roseus</i>	Phoenicopteridae
1157	SS 50g	Golden Eagle, <i>Aquila chrysaetos</i>	Accipitridae
BELARUS		2018 January 3 (Chicks) (SS/8)	A
1073	(42k)	Common Ringed Plover, <i>Charadrius hiaticula</i> (inscr. “A”)	Charadriidae
1074	(1.02r)	Common Tern, <i>Sterna hirundo</i> (inscr. “N”)	Laridae
1075	(1.26r)	Hazel Grouse, <i>Bonasa bonasia</i> (inscr. “M”)	Phasianidae
1076	(1.38r)	Gray Heron, <i>Ardea cinerea</i> (inscr. “H”)	Ardeidae
1076a		SS/8 (2ea Sc#1073–76)	
BELGIUM		2017 October 23 (High Fens Nature Reserve) (MS/10)	A
2834a	(74c)	Eurasian Nutcracker, <i>Nucifraga caryocatactes</i>	Corvidae
2834b	(74c)	Black Grouse, <i>Tetrao tetrix</i>	Phasianidae
2834c	(74c)	Boreal Owl, <i>Aegolius funereus</i>	Strigidae
2834		MS/10 (Sc#2834a–j)	
		2018 January 22 (Duck) (Single)	A
2846	(44c)	Red-crested Pochard, <i>Netta rufina</i>	Anatidae
BHUTAN		2017 November 30 (Pheasants of Bhutan) (MS/6 & SS/1)	A
1589a	20nu	Blood Pheasant, <i>Ithaginis cruentus</i>	Phasianidae
1589b	20nu	Himalayan Monal, <i>Lophophorus impejanus</i>	Phasianidae
1589c	20nu	Kalij Pheasant, <i>Lophura leucomelanos</i>	Phasianidae

BHUTAN (continued)

1589d	20nu	Tibetan Snowcock, <i>Tetraogallus tibetanus</i>	Phasianidae	
1589e	20nu	Tibetan Partridge, <i>Perdix hodgsoniae</i>	Phasianidae	Vol. 67(1)
1589f	20nu	Snow Partridge, <i>Lerwa lerwa</i>	Phasianidae	Vol. 67(1)
1590	SS 50nu	Satyr Tragopan, <i>Tragopan satyra</i>	Phasianidae	

CARIBBEAN NETHERLANDS **2017 November 27** (Endangered Animals) (SS/1) **A**

88	\$11.49	Yellow-shouldered Parrot, <i>Amazona barbadensis</i> (inscr. "Bonaire")	Psittacidae	
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CENTRAL AFRICA **2018 July 17** (Owls) (MS/4 & SS/1) **A**

a	850fr	Striped Owl, <i>Pseudoscops clamator</i>	Strigidae	
b	850fr	Philippine Eagle-Owl, <i>Bubo philippensis</i>	Strigidae	
c	850fr	Barking Owl, <i>Ninox connivens</i>	Strigidae	
d	850fr	Australian Masked-Owl, <i>Tyto novaehollandiae</i>	Tytonidae	
	SS 3300fr	Snowy Owl, <i>Bubo scandiacus</i>	Strigidae	
	Margin	R: Ural Owl, <i>Strix uralensis</i>	Strigidae	

2018 July 17 (Kingfishers) (MS/4 & SS/1) **A**

a	850fr	Common Kingfisher, <i>Alcedo atthis</i> (on branch)	Alcedinidae	
b	850fr	Same species (flying left)		
c	850fr	Same species (hovering w/ fish)		
d	850fr	Same species (on branch w/ fish)		
	SS 3300fr	Common Kingfisher, <i>Alcedo atthis</i>	Alcedinidae	
	Margin	UR: Same species Bot: Same species (w/ chicks)		

2018 July 17 (Extinct Species) (MS/4) **A**

a	900fr	Greater Prairie-Chicken, <i>Tympanuchus cupido</i> ssp. <i>cupido</i>	Phasianidae	
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ESTONIA **2018 March 30** (Bird of the Year) (Single) **A**

863	65c	Eurasian Capercaillie, <i>Tetrao urogallus</i>	Phasianidae	
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FALKLAND ISLANDS **2018 March 2** (Shipwreck type of 2017) (Set/4) **C**

1213	31p	Magellanic Cormorant, <i>Phalacrocorax magellanicus</i>	Phalacrocoracidae	
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2018 April 18 (Wildlife) (Set/4) **A**

1217	31p	Macaroni Penguin, <i>Eudyptes chrysolophus</i> (on nest)	Spheniscidae	
1220	£1.22	Same species (two birds)		

GREAT BRITAIN **2018 April 17** (Reintroduced Species) (Set/6) **A**

3715	(67p)	Osprey, <i>Pandion haliaetus</i>	Pandionidae	
3716a		Horiz pair (Sc#3715–16)		

2018 May 11 (Owls) (2ea Strip/5) **A**

3721	(67p)	Barn Owl, <i>Tyto alba</i> (adult)	Tytonidae	
3722	(67p)	Little Owl, <i>Athene noctua</i> (adult)	Strigidae	
3723	(67p)	Tawny Owl, <i>Strix aluco</i> (adult)	Strigidae	
3724	(67p)	Short-eared Owl, <i>Asio flammeus</i> (adult)	Strigidae	
3725	(67p)	Long-eared Owl, <i>Asio madagascariensis</i> (adult)	Strigidae	
3725a		Horiz Strip/5 (Sc#3721–25)		
3726	(67p)	Barn Owl, <i>Tyto alba</i> (juvenile pair)	Tytonidae	
3727	(67p)	Little Owl, <i>Athene noctua</i> (juvenile pair)	Strigidae	
3728	(67p)	Tawny Owl, <i>Strix aluco</i> (juvenile)	Strigidae	
3729	(67p)	Short-eared Owl, <i>Asio flammeus</i> (juvenile)	Strigidae	
3730	(67p)	Long-eared Owl, <i>Asio madagascariensis</i> (juvenile)	Strigidae	
3730a		Horiz Strip/5 (Sc#3726–30)		

GUINEA-BISSAU		2018 April 16 (Owls) (MS/5 & SS/1)		A
a	640fr	Eastern Screech-Owl, <i>Megascops asio</i>	Strigidae	
b	640fr	Short-eared Owl, <i>Asio flammeus</i>	Strigidae	
c	640fr	Snowy Owl, <i>Bubo scandiacus</i>	Strigidae	
d	640fr	Barn Owl, <i>Tyto alba</i>	Tytonidae	
e	640fr	Rock Eagle-Owl, <i>Bubo bengalensis</i>	Strigidae	
	Margin	LL: Spectacled Owl, <i>Pulsatrix perspicillata</i> (line drawing)	Strigidae	
		LR: Rock Eagle-Owl, <i>Bubo bengalensis</i> (line drawing)	Strigidae	
	SS 3300fr	Spectacled Owl, <i>Pulsatrix perspicillata</i>	Strigidae	
	Margin	R: Oriental Bay-Owl, <i>Phodilus badius</i>	Tytonidae	
		LL: Barn Owl, <i>Tyto alba</i> (line drawing)	Tytonidae	
		2018 April 16 (Zoological Museum of St. Petersburg) (MS/5)		A
b	640fr	Knobbed Hornbill, <i>Rhyticeros cassidix</i>	Bucerotidae	
c	640fr	Gyr Falcon, <i>Falco rusticolus</i>	Falconidae	
		2018 June 18 (Dinosaurs) (MS/5)		A
a	640fr	<i>Archaeopteryx lithographica</i>	Archaeopterygidae	
		2018 June 18 (Water Birds) (MS/5 & SS/1)		A
N/A	640fr	Red-necked Phalarope, <i>Phalaropus lobatus</i>	Scolopacidae	
N/A	640fr	Gray-cowled Wood-Rail, <i>Aramides cajaneus</i>	Rallidae	
N/A	640fr	Wattled Jacana, <i>Jacana jacana</i>	Jacanidae	
N/A	640fr	Pheasant-tailed Jacana, <i>Hydrophasianus chirurgus</i>	Jacanidae	
N/A	640fr	Hamerkop, <i>Scopus umbretta</i>	Scopidae	
	Margin	Top: Sarus Crane, <i>Antigone antigone</i>	Gruidae	
N/A	SS 3300fr	King Eider, <i>Somateria spectabilis</i>	Anatidae	
	Margin	R: Canada Goose, <i>Branta canadensis</i>	Anatidae	
ICELAND		2018 April 26 (Eggbert Olafsson, Naturalist) (Single)		B
1466	(220k)	European Shag, <i>Phalacrocorax aristotelis</i>	Phalacrocoracidae	
LATVIA		2018 June 8 (Birds) (Set/2)		A
994	50c	Common Redshank, <i>Tringa tetanus</i>	Scolopacidae	
995	€1.41	Long-tailed Tit, <i>Aegithalos caudatus</i>	Aegithalidae	
MALDIVE ISLANDS		2016 January 18 (Lighthouses) (MS/4)		C
3561a	22m	Black-headed Gull, <i>Chroicocephalus ridibundus</i> (UK)	Laridae	
3561b	22m	Same species (Greece)		
		2016 May 23 (Owls & Mushrooms) (MS/4 & SS/1)		B
3609a	22m	Great Gray Owl, <i>Strix nebulosa</i>	Strigidae	
3609b	22m	Little Owl, <i>Athene noctua</i>	Strigidae	
3609c	22m	Barn Owl, <i>Tyto alba</i>	Tytonidae	
3609d	22m	Long-eared Owl, <i>Asio otus</i>	Strigidae	
3618	SS 70m	Laughing Owl, <i>Sceloglaux albifacies</i> (Extinct)	Strigidae	
	Margin	L: Snowy Owl, <i>Bubo scandiacus</i>	Strigidae	
		UR: Great Horned Owl, <i>Bubo virginianus</i>	Strigidae	
		LR: Barn Owl, <i>Tyto alba</i>	Tytonidae	
		2018 June 7 (Flightless Birds) (MS/4 & SS/1)		A
a	22m	Emperor Penguin, <i>Aptenodytes forsteri</i>	Spheniscidae	
b	22m	Ostrich, <i>Struthio camelus</i>	Struthionidae	
c	22m	Okarito Brown Kiwi, <i>Apteryx rowi</i>	Apterygidae	
d	22m	Royal Penguin, <i>Eudyptes schlegeli</i>	Spheniscidae	

MALDIVE ISLANDS (continued)

	SS 70m	South Island Takahē, <i>Porphyrio hochstetteri</i>	Rallidae	(new)
	Margin	LR: Dwarf Cassowary, <i>Casuarius bennetti</i>	Casuariidae	
		LL: South Island Takahē, <i>Porphyrio hochstetteri</i>	Rallidae	
		2018 June 10 (Sea Birds) (MS/4 & SS/1)		A
a	20m	Black-headed Gull, <i>Chroicocephalus ridibundus</i>	Laridae	
b	20m	Herring Gull, <i>Larus argentatus</i>	Laridae	
c	20m	Dovekie, <i>Alle alle</i>	Alcidae	
d	20m	Steller's Sea-Eagle, <i>Haliaeetus pelagicus</i>	Accipitridae	
	SS 60m	Chinese Crested Tern, <i>Thalasseus bernsteini</i>	Laridae	
	Margin	R: Black-headed Gull, <i>Chroicocephalus ridibundus</i>	Laridae	
		2018 August 1 (Penguins) (MS/4 & SS/1)		A
a	20m	Macaroni Penguin, <i>Eudyptes chrysolophus</i>	Spheniscidae	
b	20m	Magellanic Penguin, <i>Spheniscus magellanicus</i>	Spheniscidae	
c	20m	Gentoo Penguin, <i>Pygoscelis papua</i>	Spheniscidae	
d	20m	Yellow-eyed Penguin, <i>Megadyptes antipodes</i>	Spheniscidae	
	SS 60m	Little Penguin, <i>Eudyptula minor</i>	Spheniscidae	
	Margin	R: Macaroni Penguin, <i>Eudyptes chrysolophus</i>	Spheniscidae	
		LL: Chinstrap Penguin, <i>Pygoscelis antarcticus</i>	Spheniscidae	
		2018 August 1 (Bee-eaters) (MS/4 & SS/1)		A
a	22m	Southern Carmine Bee-eater, <i>Merops nubicoides</i>	Meropidae	
b	22m	Green Bee-eater, <i>Merops orientalis</i>	Meropidae	
c	22m	Blue-cheeked Bee-eater, <i>Merops persicus</i>	Meropidae	
d	22m	European Bee-eater, <i>Merops apiaster</i>	Meropidae	
	SS 70m	European Bee-eater, <i>Merops apiaster</i>	Meropidae	
	Margin	UR & LL: Green Bee-eater, <i>Merops orientalis</i>	Meropidae	
		MR: Blue-tailed Bee-eater, <i>Merops philippinus</i>	Meropidae	
		LR: Rainbow Bee-eater, <i>Merops ornatus</i>	Meropidae	
		2018 August 1 (Tropical Birds) (MS/4 & SS/1)		A
a	20m	Lucifer Hummingbird, <i>Calothorax lucifer</i>	Trochilidae	
b	20m	Red-breasted Toucan, <i>Ramphastos discolorus</i>	Ramphastidae	
c	20m	Great Hornbill, <i>Buceros bicornis</i>	Bucerotidae	
d	20m	White-eared Catbird, <i>Ailuroedus buccoides</i>	Ptilonorhynchidae	(new)
	SS 60m	Red-and-green Macaw, <i>Ara chloropterus</i>	Psittacidae	
	Margin	LR: Flame Bowerbird, <i>Sericulus aureus</i> (♂ & ♀)	Ptilonorhynchidae	
		2018 August 1 (Owls) (MS/4 & SS/1)		A
a	20m	Snowy Owl, <i>Bubo scandiacus</i>	Strigidae	
b	20m	Great Gray Owl, <i>Strix nebulosa</i>	Strigidae	
c	20m	Elf Owl, <i>Micrathene whitneyi</i>	Strigidae	
d	20m	Great Horned Owl, <i>Bubo virginianus</i>	Strigidae	
	SS 60m	European Scops-Owl, <i>Otus scops</i>	Strigidae	
	Margin	LR: Barn Owl, <i>Tyto alba</i>	Tytonidae	
MONACO		2018 June 17 (Bird) (Single)		A
2935	€1.30	European Shag, <i>Phalacrocorax aristotelis</i>	Phalacrocoracidae	
MOZAMBIQUE		2018 June 15 (Hummingbirds) (MS/4 & SS/1)		A
a	116m	Violet-tailed Sylph, <i>Agelaiocercus coelestis</i>	Trochilidae	
b	116m	Purple-throated Carib, <i>Eulampis jugularis</i>	Trochilidae	
c	116m	Allen's Hummingbird, <i>Selasphorus sasin</i>	Trochilidae	
d	116m	Rufous Hummingbird, <i>Selasphorus rufus</i>	Trochilidae	

MOZAMBIQUE (continued)

	SS 300m	Anna's Hummingbird, <i>Calypte anna</i>	Trochilidae	
	Margin	LL: Anna's Hummingbird, <i>Calypte anna</i>	Trochilidae	
		UR: Mexican Violetear, <i>Colibri thalassinus</i> (previously known as Green-Violet-ear)	Trochilidae	
2018 June 15 (Penguins) (MS/4 & SS/1)				A
a	116m	Yellow-eyed Penguin, <i>Megadyptes antipodes</i>	Spheniscidae	
b	116m	Emperor Penguin, <i>Aptenodytes forsteri</i>	Spheniscidae	
c	116m	Humboldt Penguin, <i>Spheniscus humboldti</i>	Spheniscidae	
d	116m	Adélie Penguin, <i>Pygoscelis adeliae</i>	Spheniscidae	
	SS 300m	King Penguin, <i>Aptenodytes patagonicus</i>	Spheniscidae	
	Margin	LL: Emperor Penguin, <i>Aptenodytes forsteri</i>	Spheniscidae	
		Top: Fiordland Penguin, <i>Eudyptes pachyrhynchus</i>	Spheniscidae	
		UR: Gentoo Penguin, <i>Pygoscelis papua</i>	Spheniscidae	
		LR: Erect-crested Penguin, <i>Eudyptes sclateri</i>	Spheniscidae	
2018 June 15 (Global Warming) (MS/4 & SS/1)				A
c	116m	Atlantic Puffin, <i>Fratercula arctica</i>	Alcidae	
	SS 300m	Adélie Penguin, <i>Pygoscelis adeliae</i>	Spheniscidae	
NEW CALEDONIA 2017 May 4 (Stork Delivering a Baby) (Set/2)				B
1227	110fr	White Stork, <i>Ciconia ciconia</i> (w/ scratch off panel) (UL: star)	Ciconiidae	
1228	110fr	Same species (w/ scratch off panel) (UL: heart)		
2017 October 17 (Birds of Prey) (MS/4)				A
1234a	110fr	Osprey, <i>Pandion haliaetus</i>	Pandionidae	
1234b	110fr	Swamp Harrier, <i>Circus approximans</i>	Accipitridae	
1234c	110fr	New Caledonia Goshawk, <i>Accipiter haplochrous</i>	Accipitridae	Vol. 66(4)
1234d	110fr	Whistling Kite, <i>Haliastur sphenurus</i>	Accipitridae	
NEW ZEALAND 2018 July 4 (Kiwis) (SS/5 & Bklt/6) (circular)				A
2806	\$1.20	North Island Brown Kiwi, <i>Apteryx mantelli</i>	Apterygidae	
2806a		Bklt/6 (Sc#2806)		
2807	\$1.20	Great Spotted Kiwi, <i>Apteryx haastii</i>	Apterygidae	
2808	\$2.40	Little Kiwi, <i>Apteryx owenii</i>	Apterygidae	
2809	\$3	Southern Brown Kiwi, <i>Apteryx australis</i>	Apterygidae	
2810	\$3.60	Okarito Brown Kiwi, <i>Apteryx rowi</i>	Apterygidae	
2810a		SS/5 (Sc#2806-10)		
2018 August 1 (Native Animals Threatened By Predators) (SS/5)				A
2811	\$1.20	Stitchbird, <i>Notiomystis cincta</i>	Notiomystidae	
		South Island Saddleback, <i>Philesturnus carunculatus</i>	Callaeidae	
		Tui, <i>Prosthemadera novaeseelandiae</i>	Meliphagidae	
2812	\$1.20	Blue Duck, <i>Hymenolaimus malacorhynchos</i>	Anatidae	
		Great Egret, <i>Ardea alba</i>	Ardeidae	
		Sacred Kingfisher, <i>Todiramphus sanctus</i>	Alcedinidae	
2813	\$2.40	New Zealand Pigeon, <i>Hemiphaga novaeseelandiae</i>	Columbidae	
		Weka, <i>Gallirallus australis</i>	Rallidae	
2814	\$3.00	Whitehead, <i>Mohoua albicilla</i>	Mohouidae	Vol. 67(3)
		Tomtit, <i>Petroica macrocephala</i>	Petroicidae	Vol. 67(3)
		New Zealand Robin, <i>Petroica australis</i> ssp. <i>longipes</i>	Petroicidae	
		Chatham Islands Parakeet, <i>Cyanoramphus forbesi</i>	Psittaculidae	Vol. 67(3)
2815	\$3.60	Southern Boobook, <i>Ninox novaeseelandiae</i>	Strigidae	
		Great Spotted Kiwi, <i>Apteryx haastii</i>	Apterygidae	

SIERRA LEONE		2017 March 30 (Birds of Prey) (MS/4 & SS/1)	A
4173a	9800le	Palm-nut Vulture, <i>Gypohierax angolensis</i>	Accipitridae
4173b	9800le	African Harrier-Hawk, <i>Polyboroides typus</i>	Accipitridae
4173c	9800le	Pallid Harrier, <i>Circus macrourus</i>	Accipitridae
4173d	9800le	Red-necked Buzzard, <i>Buteo auguralis</i>	Accipitridae
4192	SS 40000le	Bateleur, <i>Terathopius ecaudatus</i>	Accipitridae
	Margin	UL & LR: Long-crested Eagle, <i>Lophaetus occipitalis</i>	Accipitridae
		LL: Red-necked Buzzard, <i>Buteo auguralis</i>	Accipitridae
		2017 March 30 (Seabirds) (MS/4 & SS/1)	A
4174a	9800le	Black-headed Gull, <i>Chroicocephalus ridibundus</i> (Cap: <i>Larus r.</i>)	Laridae
4174b	9800le	Sooty Shearwater, <i>Ardenna grisea</i>	Procellariidae
4174c	9800le	Lesser Crested Tern, <i>Thalasseus bengalensis</i>	Laridae
4174d	9800le	European Shag, <i>Phalacrocorax aristotelis</i>	Phalacrocoracidae
4193	SS 40000le	Brown Booby, <i>Sula leucogaster</i>	Sulidae
	Margin	LR: Same species	
		LL: Reed Cormorant, <i>Microcarbo africanus</i>	Phalacrocoracidae
		2017 March 30 (Owls) (MS/4 & SS/1)	A
4175a	9800le	Northern White-faced Owl, <i>Ptilopsis leucotis</i>	Strigidae
4175b	9800le	Barn Owl, <i>Tyto alba</i>	Tytonidae
4175c	9800le	Fraser's Eagle-Owl, <i>Bubo poensis</i>	Strigidae
4175d	9800le	African Wood-Owl, <i>Strix woodfordii</i>	Strigidae
4194	SS 40000le	Verreaux's Eagle-Owl, <i>Bubo lacteus</i>	Strigidae
	Margin	LL: Barn Owl, <i>Tyto alba</i>	Tytonidae
		LR: Pearl-spotted Owlet, <i>Glaucidium perlatum</i>	Strigidae
		2017 March 30 (Global Warming) (MS/4)	A
4181a	9800le	King Penguin, <i>Aptenodytes patagonicus</i>	Spheniscidae
4181d	9800le	Atlantic Puffin, <i>Fratercula arctica</i>	Alcidae
		2017 March 30 (Endemic Animals of Indonesia) (MS/4) (circular)	A
4205a	9800le	Green Peafowl, <i>Pavo muticus</i>	Phasianidae
		2017 May 30 (Lesser Flamingo) (WWF) (MS/4 & SS/1)	A
4249a	9800le	Lesser Flamingo, <i>Phoeniconaias minor</i> (two touching beaks)	Phoenicopteridae
4249b	9800le	Same species (three in flight)	
4249c	9800le	Same species (two feeding)	
4249d	9800le	Same species (one in water, one grooming)	
	Margin	Top: Same species	
4250	SS 40000le	Lesser Flamingo, <i>Phoeniconaias minor</i>	Phoenicopteridae
	Margin	R: Same species (w/ chick)	
		2017 June 30 (Hornbills) (MS/4 & SS/1)	A
4345a	9800le	Silvery-cheeked Hornbill, <i>Bycanistes brevis</i>	Bucerotidae
4345b	9800le	Malabar Pied-Hornbill, <i>Anthracoceros coronatus</i>	Bucerotidae
4345c	9800le	Knobbed Hornbill, <i>Rhyticeros cassidix</i> (Cap: <i>Aceros c.</i>)	Bucerotidae
4345d	9800le	Rufous Hornbill, <i>Buceros hydrocorax</i>	Bucerotidae
4365	SS 40000le	Southern Ground-Hornbill, <i>Bucorvus leadbeateri</i>	Bucorvidae
	Margin	UR & LL: Rhinoceros Hornbill, <i>Buceros rhinoceros</i>	Bucerotidae
		MR: Wrinkled Hornbill, <i>Rhabdotorrhinus corrugatus</i> (Cap/Syn: <i>Aceros corrugatus</i>)	Bucerotidae

- SIERRA LEONE** (continued) **2017 June 30** (Sunbirds) (MS/4 & SS/1) **A**
- 4346a 9800le Variable Sunbird, *Cinnyris venustus* Nectariniidae
 4346b 9800le Orange-breasted Sunbird, *Anthobaphes violacea* Nectariniidae
 4346c 9800le Purple Sunbird, *Cinnyris asiaticus* Nectariniidae
 4346d 9800le Crimson Sunbird, *Aethopyga siparaja* Nectariniidae
 4366 SS 40000le Regal Sunbird, *Cinnyris regius* Nectariniidae
 Margin R: Same species
 LL: White-bellied Sunbird, *Cinnyris talatala* Nectariniidae
 Bot: Brown-throated Sunbird, *Anthreptes malacensis* Nectariniidae
- 2017 June 30** (Owls) (MS/4 & SS/1) **A**
- 4347a 9800le Spotted Wood-Owl, *Strix seloputo* Strigidae
 4347b 9800le Northern Saw-Whet Owl, *Aegolius acadicus* Strigidae
 4347c 9800le Northern Pygmy-Owl, *Glauclidium gnoma* Strigidae
 4347d 9800le Oriental Bay-Owl, *Phodilus badius* Tytonidae
 4367 SS 40000le Spectacled Owl, *Pulsatrix perspicillata* Strigidae
 Margin R: Same species
- 2017 June 30** (Parrots) (MS/4 & SS/1) **A**
- 4348a 9800le Jandays Parakeet, *Aratinga jandaya* Psittacidae
 4384b 9800le Hyacinth Macaw, *Anodorhynchus hyacinthinus* Psittacidae
 4384c 9800le Gray Parrot, *Psittacus erithacus* Psittacidae
 4384d 9800le Rainbow Lorikeet, *Trichoglossus haematodus* Psittaculidae
 4368 SS 40000le Dusky Lory, *Pseudeos fuscata* Psittaculidae
 Margin LL: Same species
 UR: Red-tailed Black Cockatoo, *Calyptorhynchus banksii* Cacatuidae
 LR: Major Mitchell's Cockatoo, *Cacatua leadbeateri* Cacatuidae
- 2017 June 30** (Bee-eaters) (MS/4 & SS/1) **A**
- 4349a 9800le Blue-headed Bee-eater, *Merops muelleri* Meropidae
 4349b 9800le Rainbow Bee-eater, *Merops ornatus* Meropidae
 4349c 9800le Southern Carmine Bee-eater, *Merops nubicoides* Meropidae
 4349d 9800le White-fronted Bee-eater, *Merops bullockoides* Meropidae
 4369 SS 40000le Red-bearded Bee-eater, *Nyctornis amictus* Meropidae
 Margin UR: Same species
 LL: White-fronted Bee-eater, *Merops bullockoides* Meropidae
- 2017 June 30** (Rare Birds of Sierra Leone) (Birdpex) (MS/4 & SS/1) **A**
- 4350a 9800le Cassin's Honeyguide, *Prodotiscus insignis* Indicatoridae Vol. 66(3)
 4350b 9800le Bristle-nosed Barbet, *Gymnobucco pelli* Lybiidae Vol. 66(3)
 4350c 9800le Black Dwarf Hornbill, *Horizocerus hartlaubi* Bucerotidae
 4350d 9800le Black Spinetail, *Telacanthura melanopygia* Apodidae Vol. 66(3)
 4371 SS 40000le Nkulengu Rail, *Himantornis haematopus* Rallidae Vol. 66(3)
 Margin R: Blue-spotted Wood Dove, *Turtur afer* Columbidae
- 2017 August 30** (135th anniv. Charles Darwin) (MS/4) **A**
- 4430b 9800le UL: Medium Tree-Finch, *Camarhynchus pauper* (head) Thraupidae
 UR: Large Ground-Finch, *Geospiza magnirostris* (head) Thraupidae
 LL: Green Warbler-Finch, *Certhidea olivacea* (head) Thraupidae
 LR: Woodpecker Finch, *Camarhynchus pallidus* (head) Thraupidae
- 2017 August 30** (Melting of Antarctica) (MS/4) **A**
- 4432a 9800le Emperor Penguin, *Aptenodytes forsteri* (adult & juvenile) Spheniscidae

SIERRA LEONE (continued)		2017 August 30 (Birds of Prey) (MS/4 & SS/1)	A
4434a	9800le	Savanna Hawk, <i>Buteogallus meridionalis</i>	Accipitridae
4434b	9800le	Cinereous Vulture, <i>Aegypius monachus</i>	Accipitridae
4434c	9800le	Jerdon's Baza, <i>Aviceda jerdoni</i>	Accipitridae
4434d	9800le	Variable Hawk, <i>Geranoaetus polyosoma</i>	Accipitridae
4453	SS 40000le	Himalayan Griffon, <i>Gyps himalayensis</i>	Accipitridae
	Margin	LL: White-eyed Buzzard, <i>Butastur teesa</i>	Accipitridae
		Top: African Fish Eagle, <i>Haliaeetus vocifer</i>	Accipitridae
		UR: Madagascan Serpent Eagle, <i>Eutriorchis astur</i>	Accipitridae
		2017 August 30 (Endangered Species of China) (MS/4)	S A
4459a	9800le	Black-necked Crane, <i>Grus nigricollis</i>	Gruidae
		2017 September 29 (Penguins) (MS/4 & SS/1)	A
4464a	9800le	Southern Rockhopper Penguin, <i>Eudyptes chrysocome</i>	Spheniscidae
4464b	9800le	Gentoo Penguin, <i>Pygoscelis papua</i>	Spheniscidae
4464c	9800le	Adélie Penguin, <i>Pygoscelis adeliae</i>	Spheniscidae
4464d	9800le	Magellanic Penguin, <i>Spheniscus magellanicus</i>	Spheniscidae
	Margin	LL: King Penguin, <i>Aptenodytes patagonicus</i> (w/ chick)	Spheniscidae
		LR: Southern Rockhopper Penguin, <i>Eudyptes chrysocome</i>	Spheniscidae
4484	SS 40000le	Magellanic Penguin, <i>Spheniscus magellanicus</i>	Spheniscidae
	Margin	LL: Adélie Penguin, <i>Pygoscelis adeliae</i>	Spheniscidae
		LR: Chinstrap Penguin, <i>Pygoscelis antarcticus</i>	Spheniscidae
		2017 September 29 (Water Birds) (MS/4 & SS/1)	A
4465a	9800le	African Darter, <i>Anhinga rufa</i>	Anhingidae
4465b	9800le	Northern Gannet, <i>Morus bassanus</i>	Sulidae
4465c	9800le	African Finfoot, <i>Podica senegalensis</i>	Heliornithidae
4465d	9800le	Brown Booby, <i>Sula leucogaster</i>	Sulidae
	Margin	LL: Egyptian Goose, <i>Alopochen aegyptiaca</i>	Anatidae
		LR: Spur-winged Goose, <i>Plectropterus gambensis</i>	Anatidae
4485	SS 40000le	Pink-backed Pelican, <i>Pelecanus rufescens</i>	Pelecanidae
	Margin	LL: Greater Flamingo, <i>Phoenicopterus roseus</i>	Phoenicopteridae
		Ctr: Little Grebe, <i>Tachybaptus ruficollis</i>	Podicipedidae
		MR: African Spoonbill, <i>Platalea alba</i>	Threskiornithidae
		LR: Gull-billed Tern, <i>Gelochelidon nilotica</i>	Laridae
		2017 September 29 (Endangered Species) (MS/4)	A
4474d	9800le	Blue-throated Macaw, <i>Ara glaucogularis</i>	Psittacidae
		2017 September 29 (National Parks) (MS/4 & SS/1)	A
4475a	9800le	Splendid Starling, <i>Lamprotornis splendidus</i>	Sturnidae
4495	SS 40000le	Giant Kingfisher, <i>Megaceryle maxima</i>	Alcedinidae
	Margin	LR: White-eared Bulbul, <i>Pycnonotus leucotis</i>	Pycnonotidae
		2017 November 30 (Greatest Polar Explorers) (MS/4)	B
4550a	9800le	Emperor Penguin, <i>Aptenodytes forsteri</i> (w/ Richard E. Byrd)	Spheniscidae
		2017 December 29 (Owls) (MS/4 & SS/1)	A*
4591a	9800le	Red-chested Owlet, <i>Glaucidium tephronotum</i>	Strigidae
4591b	9800le	African Wood-Owl, <i>Strix woodfordii</i>	Strigidae
4591c	9800le	Barn Owl, <i>Tyto alba</i>	Tytonidae
4591d	9800le	Pearl-spotted Owlet, <i>Glaucidium perlatum</i>	Strigidae

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SIERRA LEONE (continued)

4611	SS 40000le	Northern White-faced Owl, <i>Ptilopsis leucotis</i>	Strigidae	
	Margin	UL: Pel's Fishing Owl, <i>Scotopelia peli</i>	Strigidae	
		UR: Verreaux's Eagle-owl, <i>Bubo lacteus</i>	Strigidae	
		Bot: Barn Owl, <i>Tyto alba</i>	Tytonidae	
2017 December 29 (Doves) (MS/4 & SS/1)				A
4592a	9800le	Namaqua Dove, <i>Oena capensis</i>	Columbidae	
4592b	9800le	European Turtle-Dove, <i>Streptopelia turtur</i>	Columbidae	
4592c	9800le	Laughing Dove, <i>Streptopelia senegalensis</i> (Cap: <i>Spilopelia s.</i>)	Columbidae	
4592d	9800le	Tambourine Dove, <i>Turtur tympanistria</i>	Columbidae	
4612	SS 40000le	Red-eyed Dove, <i>Streptopelia semitorquata</i>	Columbidae	
	Margin	L: Blue-headed Wood Dove, <i>Turtur brehmeri</i>	Columbidae	
		LR: Tambourine Dove, <i>Turtur tympanistria</i>	Columbidae	
2017 December 29 (Hawks) (MS/4 & SS/1)				A
4593a	9800le	Bat Hawk, <i>Macheiramphus alcinus</i>	Accipitridae	
4593b	9800le	Dark Chanting-Goshawk, <i>Melierax metabates</i>	Accipitridae	
4593c	9800le	African Cuckoo-Hawk, <i>Aviceda cuculoides</i>	Accipitridae	
4593d	9800le	African Harrier-Hawk, <i>Polyboroides typus</i>	Accipitridae	
4613	SS 40000le	Dark Chanting-Goshawk, <i>Melierax metabates</i>	Accipitridae	
	Margin	LL: Gabar Goshawk, <i>Micronisus gabar</i>	Accipitridae	
		LR: African Harrier-hawk, <i>Polyboroides typus</i>	Accipitridae	
2017 December 29 (Cuckoos) (MS/4 & SS/1)				A
4594a	9800le	African Emerald Cuckoo, <i>Chrysococcyx cupreus</i>	Cuculidae	
4594b	9800le	Great Spotted Cuckoo, <i>Clamator glandarius</i>	Cuculidae	
4594c	9800le	Levaillant's Cuckoo, <i>Clamator levaillantii</i>	Cuculidae	
4594d	9800le	Diederik Cuckoo, <i>Chrysococcyx caprius</i>	Cuculidae	
4614	SS 40000le	Common Cuckoo, <i>Cuculus canorus</i>	Cuculidae	
	Margin	ML & LL: Senegal Coucal, <i>Centropus senegalensis</i>	Cuculidae	
		MR & LR: Common Cuckoo, <i>Cuculus canorus</i>	Cuculidae	
2017 December 29 (Kingfishers) (MS/4 & SS/1)				A
4595a	9800le	Chocolate-backed Kingfisher, <i>Halcyon badia</i>	Alcedinidae	
4595b	9800le	Pied Kingfisher, <i>Ceryle rudis</i>	Alcedinidae	
4595c	9800le	Giant Kingfisher, <i>Megaceryle maximus</i>	Alcedinidae	
4595d	9800le	Shining-blue Kingfisher, <i>Alcedo quadribrachys</i>	Alcedinidae	
4615	SS 40000le	African Pygmy-Kingfisher, <i>Ispidina picta</i>	Alcedinidae	
	Margin	LL: Chocolate-backed Kingfisher, <i>Halcyon badia</i>	Alcedinidae	
		LR: Woodland Kingfisher, <i>Halcyon senegalensis</i>	Alcedinidae	
2017 December 29 (Indigobirds) (MS/4 & SS/1)				A
4596a	9800le	Cameron Indigobird, <i>Vidua camerunensis</i>	Viduidae	
4596b	9800le	Wilson's Indigobird, <i>Vidua wilsoni</i>	Viduidae	
4596c	9800le	Variable Indigobird, <i>Vidua funereal</i>	Viduidae	
4596d	9800le	Baka Indigobird, <i>Vidua larvaticola</i>	Viduidae	
4616	SS 40000le	Village Indigobird, <i>Vidua chalybeate</i>	Viduidae	
	Margin	Same species		
2017 December 29 (First Solar Train) (SS/1)				B
4620	SS 40000le	Scarlet Myzomela, <i>Myzomela sanguinolenta</i>	Meliphagidae	

NEW BIRDS IN THE PHILATELIC AVIARY

Charles E. Braun, BU1364

Corrections

In Vol. 67(3), the Persian Nuthatch stamp is from Kyrgyzstan, not Kazakhstan.

See the listing following the Clements 2018 Taxonomic Update on page 317 for changes to identifications affected by the Clements revisions.

New Birds



VELVET SCOTER, *Melanitta fusca* Anatidae
Finland (Åland Islands), 1987 January 2, Sc#21, 12m

Length: 20 to 23 inches, migratory. The male (R) is black with white eye and wing patches and an orange and yellow bill. The female (L) is brown.
Habitat: Breeds in arctic tundra and boreal forest. Winters at sea.
Range: Breeds from Alaska to Hudson Bay. Winters off the North American coasts.
Reference: del Hoyo, J., A. Elliott, and J. Sargatal, Eds. *Handbook of the Birds of the World, Volume 1.*



SOUTH ISLAND TAKAHĒ, *Porphyrio hochstetteri* Rallidae
Maldive Islands, 2018 July 6, not yet cataloged, 70r SS

Length: 23 inches, sexes alike, resident. Greenish brown above and purplish blue head and below with a white undertail.
Habitat: Highland grassland and scrub forest.
Range: South Island, New Zealand.
Reference: del Hoyo, J., A. Elliott, and J. Sargatal, Eds. *Handbook of the Birds of the World, Volume 3.*



†**SAINT HELENA HOOPOE, *Upupa antaios*** Upupidae
Guinea, 2018 August 8, not yet cataloged, 12500fr

Length: About 16 inches, sexes alike, resident. Pinkish brown with a black-spotted crest and black-and-white wings and tail.
Habitat: Lightly vegetated areas.
Range: Formerly St. Helena Island, South Atlantic. Extinct early 16th century.
Reference: Olson, S. L. *Paleornithology of St. Helena Island, South Atlantic Ocean.*



SPOT-BACKED PUFFBIRD, *Nystalus maculatus* Bucconidae
Paraguay, 2018 September 21, not yet cataloged, 3000g

Length: 7 inches, sexes alike, resident. Spotted brown above and spotted white below with an orange-rufous throat.
Habitat: Semi-deciduous woodland, savanna, scrub, and farms.
Range: Eastern-to-central Brazil and southern Bolivia to northwestern Argentina.
Reference: del Hoyo, J., A. Elliott, and J. Sargatal, Eds. *Handbook of the Birds of the World, Volume 7.*



GRAYISH PICULET, *Picumnus granadensis* Picidae
Colombia, 2018 August 24, not yet cataloged, 1000p

Length: 4 inches, sexes similar, resident. Gray-brown above and whitish below with a spotted black crown.

Habitat: Forest edges, scrub, and woodland.

Range: Northwestern Colombia.

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



OLIVE-CROWNED CRESCENTCHEST, *Melanopareia maximiliani*
Melanopareidae

Paraguay, 2018 September 21, not yet cataloged, 2000g

Length: 6 inches, sexes alike, resident. Olive-brown above and ochraceous below, with a black face and a deep buff throat.

Habitat: Arid scrub and grassy areas.

Range: Western Bolivia to northern Argentina.

Reference: del Hoyo, J., A. Elliott, and J. Sargatal, Eds. *Handbook of the Birds of the World, Volume 8.*



APICAL FLYCATCHER, *Myiarchus apicalis* Tyrannidae
Colombia, 2018 August 24, not yet cataloged, 1000p

Length: 7 inches, sexes similar, resident. Darkish olive above and yellow below with gray throat and breast and whitish tail tips.

Habitat: Scrubby vegetation in dry valleys.

Range: West-central Colombia.

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



TAN-CAPPED CATBIRD, *Ailuroedus geislerorum* Ptilonorhynchidae
Maldivian Islands, 2018 August 8, not yet cataloged, 20m
(Cap: *Ailuroedus buccoides*)

Length: 10 inches, sexes alike, resident. Green above and black-spotted white below with a pale-tan cap and white face.

Habitat: Forest and forest edges.

Range: Northern New Guinea and Yapen Island.

Reference: del Hoyo, J., A. Elliott, and J. Sargatal, Eds. *Handbook of the Birds of the World, Volume 14.*



CHESTNUT-EARED LAUGHINGTHRUSH, *Ianthocincla konkakinhensis*
Leiothrichidae (Cap: *Garrulax konkakinhensis*)
Vietnam, 2018 August 18, not yet cataloged, 3000d

Length: 10 inches, sexes alike, resident. Black-barred olive-buff above and black-spotted buff below with a black crown, gray supercilium, and chestnut ears.

Habitat: Broadleaf forest, bamboo, and forest edges.

Range: Central highlands of Vietnam and adjacent Laos.

Reference: del Hoyo, J., A. Elliott, and J. Sargatal, Eds. *Handbook of the Birds of the World, Volume 12.*



CHIVI VIREO, *Vireo chivi* Vireonidae
Venezuela, 1968 December 19, Sc#C1005, 1b

Length: 5 to 6 inches, sexes alike, migratory. Greenish-gray above and whitish below with a gray crown, white superciliary and yellowish flanks.

Habitat: Forest and forest edges.

Range: Breeds from Colombia to Peru and Brazil. Winters from Ecuador to northern Argentina.

Reference: del Hoyo, J., A. Elliott, and J. Sargatal, Eds. *Handbook of the Birds of the World, Volume 15*.



TAIWAN THRUSH, *Turdus niveiceps* Turdidae
China (Taiwan), 2009 January 15, Sc#3846, \$9

Length: 9 inches, resident. The male (shown) is blackish above and orange below with a white hood. The female is brown above and orange below with a buff stripe behind the eye and a streaky throat.

Habitat: Forest and forest edges.

Range: Taiwan.

Reference: del Hoyo, J., A. Elliott, and J. Sargatal, Eds. *Handbook of the Birds of the World, Volume 15*.



PURPLE-RUMPED SUNBIRD, *Leptocoma zeylonica* Nectariniidae
Previously on a local issue from Eynhallow
Maldive Islands, 2018 April 10, not yet cataloged, 60r SS

Length: 4 inches, resident. The male (shown) is chestnut-maroon above and yellow below with a metallic green crown, purple throat and rump, and yellowish-white undertail. The female is olive-tinged brown above and yellow and white below.

Habitat: Forest, forest edges, farms, and gardens.

Range: Peninsular India to Sri Lanka and western Bangladesh.

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



YELLOW-EARED SPIDERHUNTER, *Arachnothera chrysogenys* Nectariniidae
Maldive Islands, 2018 April 10, not yet cataloged, 20r

Length: 8 inches, sexes similar, resident. Olive-green above and greenish-streaked yellowish-green below with yellow eye rings and ear patches.

Habitat: Forest, forest edges, mangroves, and gardens.

Range: Southern Thailand to Borneo and western Java.

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



MOURNING WARBLER, *Geothlypis philadelphia* Parulidae
Niger, 2018 June 26, not yet cataloged, 3300fr SS (LR)

Length: 5 inches, migratory. The male (shown) is olive-green above and yellow below with a dark gray hood. The female has a pale gray hood.
Habitat: Breeds in forest clearings with dense undergrowth. Winters in dense scrub.

Range: Breeds in west-central and southern Canada. Winters from Nicaragua to northwestern South America.

Reference: del Hoyo, J., A. Elliott, and J. Sargatal, Eds. *Handbook of the Birds of the World, Volume 15*.



BLACK-AND-GOLD TANAGER, *Bangsia melanochlamys* Thraupidae
Colombia, 2018 August 24, not yet cataloged, 1000p

Length: 6 inches, sexes similar, resident. Dull black head and above and bright golden-yellow below.

Habitat: Humid mountain forest.

Range: Central Colombia.

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



MULTICOLORED TANAGER, *Chlorochrysa nitidissima* Thraupidae
Colombia, 2018 August 24, not yet cataloged, 1000p

Length: 5 inches, resident. The male (shown) is green above and blue below with a yellow face and back, glistening golden-green nape and a black ear patch. The female is paler below with a blackish-chestnut ear patch.

Habitat: Montane forest and woodland.

Range: Central Colombia.

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



GOLDEN-NAPED TANAGER, *Tangara ruficervix* Thraupidae
Colombia, 2018 August 24, not yet cataloged, 1000p

Length: 5 inches, sexes similar, resident. Blue with a golden nape and buff lower belly.

Habitat: Humid forest borders and shrubby pastures.

Range: Central Colombia to Bolivia.

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

CLEMENTS 2018 UPDATE

Charles E. Braun, BU1364 & Jack R. Congrove, BU1424

The Clements 2018 taxonomic update was released by Cornell in August. Changes ranged from adding an order to minor typographic corrections. The revised taxonomic order is given in the table below.

One new order is added (**Musophagiformes**) for the Turacos (Musophagidae). Consequently, we now recognize 41 extant orders. Two new families are added this year: **Oceanitidae** (Southern Storm-Petrels) and **Platylophidae** (Crested Shrikejay—formerly Crested Jay). The total number of extant families in the *eBird/Clements Checklist* increases to 250, with an additional extinct family (Mohoidae: Hawaiian Honeyeaters), for a total of 251 families.

The listing also extensively revises the sequence of orders among the non-passerines, and the sequence of families in the nine-primaried oscines.

The table below shows the revised order of the 250 extant families accepted by Clements Checklist. The names of orders are in **BOLD CAPITAL** lettering and changes are noted in **bold blue** font. An additional extinct family (†Mohoidae: Hawaiian Honeyeaters) is listed. The listing also provides the quantity of families in each order (in parentheses, after the name of each order), and the quantity of species in each family (in parentheses, after the name of each family).

No.	Family	Members	No.	Family	Members	
	STRUTHIONIFORMES (1)			OTIDIFORMES (1)		
1	Struthionidae	Ostrich (2)	19	Otididae	Bustards (26)	
	RHEIFORMES (1)			MUSOPHAGIFORMES (1) (new)		
2	Rheidae	Rheas (2)	20	Musophagidae	Turacos (23)	
	TINAMIFORMES (1)			CUCULIFORMES (1)		
3	Tinamidae	Tinamous (47)	21	Cuculidae	Cuckoos (146)	
	CASUARIIFORMES (1)			CAPRIMULGIFORMES (8)		
4	Casuariidae	Cassowaries & Emu (4)	22	Podargidae	Frogmouths (15)	
	APTERYGIFORMES (1)			23	Caprimulgidae	Nightjars & Allies (98)
5	Apterygidae	Kiwis (5)	24	Nyctibiidae	Potoos (7)	
	ANSERIFORMES (3)			25	Steatornithidae	Oilbird (1)
6	Anhimidae	Screamers (3)	26	Aegothelidae	Owlet-Nightjars (10)	
7	Anseranatidae	Magpie Goose (1)	27	Apodidae	Swifts (112)	
8	Anatidae	Ducks, Geese, & Waterfowl (168)	28	Hemiprocnidae	Treeswifts (4)	
	GALLIFORMES (5)			29	Trochilidae	Hummingbirds (347)
9	Megapodiidae	Megapodes (22)		OPISTHOCOMIFORMES (1)		
10	Cracidae	Guans, Chachalacas, & Curassows (54)	30	Opisthocomidae	Hoatzin (1)	
11	Numididae	Guineafowl (6)		GRUIFORMES (6)		
12	Odontophoridae	New World Quail (33)	31	Sarothruridae	Flufftails (12)	
13	Phasianidae	Pheasants, Grouse, & Allies (177)	32	Rallidae	Rails, Gallinules, & Coots (144)	
	PHOENICOPTERIFORMES (1)			33	Heliornithidae	Finfoots (3)
14	Phoenicopteridae	Flamingos (6)	34	Aramidae	Limpkin (1)	
	PODICIPEDIFORMES (1)			35	Psophiidae	Trumpeters (3)
15	Podicipedidae	Grebes (22)	36	Gruidae	Cranes (15)	
	COLUMBIFORMES (1)			CHARADRIIFORMES (19)		
16	Columbidae	Pigeons & Doves (342)	37	Chionidae	Sheathbills (2)	
	MESITORNITHIFORMES (1)			38	Pluvianellidae	Magellanic Plover (1)
17	Mesitornithidae	Mesites (3)	39	Burhinidae	Thick-knees (10)	
	PTEROCLIFORMES (1)			40	Pluvianidae	Egyptian Plover (1)
18	Pteroclididae	Sandgrouse (16)	41	Recurvirostridae	Stilts & Avocets (9)	

No.	Family	Members	No.	Family	Members
	CHARADRIIFORMES (continued)			STRIGIFORMES (2)	
42	Ibidorhynchidae	Ibisbill (1)	79	Tytonidae	Barn-Owls (18)
43	Haematopodidae	Oystercatchers (12)	80	Strigidae	Owls (209)
44	Charadriidae	Plovers & Lapwings (67)		COLIIFORMES (1)	
45	Pedionomidae	Plains-wanderer (1)	81	Coliidae	Mousebirds (6)
46	Thinocoridae	Seedsnipes (4)		LEPTOSOMIFORMES (1)	
47	Rostratulidae	Painted-Snipes (3)	82	Leptosomidae	Cuckoo-Roller (1)
48	Jacanidae	Jacanas (8)		TROGONIFORMES (1)	
49	Scolopacidae	Sandpipers & Allies (97)	83	Trogonidae	Trogons (44)
50	Turnicidae	Buttonquail (16)		BUCEROTIFORMES (4)	
51	Dromadidae	Crab Plover (1)	84	Upupidae	Hoopoes (2)
52	Glareolidae	Pratincoles & Coursers (17)	85	Phoeniculidae	Woodhoopoes & Scimitar-bills (8)
53	Stercorariidae	Skuas & Jaegers (7)	86	Bucorvidae	Ground-Hornbills (2)
54	Alcidae	Auks, Murres, & Puffins (25)	87	Bucerotidae	Hornbills (59)
55	Laridae	Gulls, Terns, & Skimmers (98)		CORACIIFORMES (6)	
	EURYPYGIFORMES (2)		88	Todidae	Todies (5)
56	Rhynochetidae	Kagu (1)	89	Momotidae	Motmots (14)
57	Eurypygidae	Sunbittern (1)	90	Alcedinidae	Kingfishers (117)
	PHAETHONTIFORMES (1)		91	Meropidae	Bee-eaters (28)
58	Phaethontidae	Tropicbirds (3)	92	Coraciidae	Rollers (12)
	GAVIIFORMES (1)		93	Brachypteraciidae	Ground-Rollers (5)
59	Gaviidae	Loons (5)		GALBULIFORMES (2)	
	SPHENISCIFORMES (1)		94	Bucconidae	Puffbirds (36)
60	Spheniscidae	Penguins (18)	95	Galbulidae	Jacamars (18)
	PROCELLARIIFORMES (4)			PICIFORMES (7)	
61	Diomedidae	Albatrosses (15)	96	Lybiidae	African Barbets (41)
62	Oceanitidae (new)	Southern Storm Petrels (9)	97	Megalaimidae	Asian Barbets (34)
63	Hydrobatidae	Storm-Petrels (18)	98	Capitonidae	New World Barbets (14)
64	Procellariidae	Shearwaters & Petrels (92)	99	Semnornithidae	Toucan-Barbets (2)
	CICONIIFORMES (1)		100	Ramphastidae	Toucans (36)
65	Ciconiidae	Storks (19)	101	Indicatoridae	Honeyguides (17)
	SULIFORMES (4)		102	Picidae	Woodpeckers (231)
66	Fregatidae	Frigatebirds (5)		CARIAMIFORMES (1)	
67	Sulidae	Boobies & Gannets (10)	103	Cariamidae	Seriemas (2)
68	Anhingidae	Anhingas (4)		FALCONIFORMES (1)	
69	Phalacrocoracidae	Cormorants & Shags (40)	104	Falconidae	Falcons & Caracaras (65)
	PELECANIFORMES (5)			PSITTACIFORMES (4)	
70	Pelecanidae	Pelicans (8)	105	Strigopidae	New Zealand Parrots (4)
71	Balaenicipitidae	Shoebill (1)	106	Cacatuidae	Cockatoos (21)
72	Scopidae	Hamerkop (1)	107	Psittaculidae	Old World Parrots (180)
73	Ardeidae	Hérons, Egrets, & Bitterns (64)	108	Psittacidae	New World & African Parrots (168)
74	Threskiornithidae	Ibises & Spoonbills (34)		PASSERIFORMES (142)	
	CATHARTIFORMES (1)		109	Acanthisittidae	New Zealand Wrens (4)
75	Cathartidae	New World Vultures (7)	110	Calyptomenidae	African & Green Broadbills (6)
	ACCIPITRIFORMES (3)		111	Eurylaimidae	Asian & Grauer's Broadbills (9)
76	Sagittariidae	Secretary-bird (1)	112	Sapayoidae	Sapayoa (1)
77	Pandionidae	Osprey (1)	113	Philepittidae	Asities (4)
78	Accipitridae	Hawks, Eagles, & Kites (247)	114	Pittidae	Pittas (44)

No.	Family	Members	No.	Family	Members
	PASSERIFORMES (continued)			PASSERIFORMES (continued)	
115	Thamnophilidae	Typical Antbirds (236)	162	Laniidae	Shrikes (33)
116	Melanopareidae	Crescentchests (4)	163	Vireonidae	Vireos, Shrike-Babblers, & Erpornis (63)
117	Conopophagidae	Gnateaters (11)	164	Oriolidae	Old World Orioles (36)
118	Grallariidae	Antpittas (55)	165	Dicruridae	Drongos (25)
119	Rhinocryptidae	Tapaculos (60)	166	Rhipiduridae	Fantails (53)
120	Formicariidae	Antthrushes (11)	167	Ifritidae	Ifrita (1)
121	Furnariidae	Ovenbirds & Woodcreepers (303)	168	Monarchidae	Monarch Flycatchers (99)
122	Tyrannidae	Tyrant Flycatchers (423)	169	Corvidae	Crows, Jays, & Magpies (128)
123	Oxyruncidae	Sharpbill (1)	170	Corcoracidae	White-winged Chough & Apostlebird (2)
124	Cotingidae	Cotingas (65)	171	Paradisaeidae	Birds-of-paradise (42)
125	Pipridae	Manakins (56)	172	Melampittidae	Melampittas (2)
126	Tityridae	Tityras & Allies (33)	173	Petroicidae	Australasian Robins (47)
127	Menuridae	Lyrebirds (2)	174	Picathartidae	Rockfowl (2)
128	Atrichornithidae	Scrub-birds (2)	175	Chaetopidae	Rockjumpers (2)
129	Ptilonorhynchidae	Bowerbirds (26)	176	Eupetidae	Rail-babbler (1)
130	Climacteridae	Australasian Treecreepers (7)	177	Panuridae	Bearded Reedling (1)
131	Maluridae	Fairywrens (33)	178	Nicatoridae	Nicators (3)
132	Meliphagidae	Honeyeaters (186)	179	Alaudidae	Larks (97)
133	Dasyornithidae	Bristlebirds (3)	180	Hirundinidae	Swallows (86)
134	Pardalotidae	Pardalotes (4)	181	Stenostiridae	Fairy Flycatchers (9)
135	Acanthizidae	Thornbills & Allies (64)	182	Paridae	Tits, Chickadees & Titmice (63)
136	Pomatostomidae	Pseudo-Babblers (5)	183	Remizidae	Penduline-Tits (11)
137	Orthonychidae	Logrunners (3)	184	Aegithalidae	Long-tailed Tits (11)
138	Cnemophilidae	Satinbirds (3)	185	Sittidae	Nuthatches (27)
139	Melanocharitidae	Berrypeckers & Longbills (10)	186	Tichodromidae	Wallcreeper (1)
140	Mohouidae	Whiteheads (3)	187	Certhiidae	Treecreepers (11)
141	Paramythiidae	Tit & Crested Berrypeckers (2)	188	Troglodytidae	Wrens (85)
142	Callaeidae	Wattlebirds (5)	189	Poliotilidae	Gnatcatchers (15)
143	Notiomystidae	Stitchbird (1)	190	Cinclidae	Dippers (5)
144	Psophodidae	Whipbirds & Wedgebills (5)	191	Pycnonotidae	Bulbuls (143)
145	Cinclosomatidae	Quail-thrushes & Jewel-babblers (11)	192	Regulidae	Kinglets (6)
146	Platysteiridae	Wattle-eyes & Batises (30)	193	Pnoepygidae	Cupwings (5)
147	Vangidae	Vangas, Helmetshrikes & Allies (39)	194	Macrosphenidae	African Warblers (21)
148	Malaconotidae	Bushshrikes & Allies (50)	195	Cettiidae	Bush-Warblers & Allies (36)
149	Machaerirhynchidae	Boatbills (2)	196	Phylloscopidae	Leaf-Warblers (76)
150	Artamidae	Woodswallows (11)	197	Acrocephalidae	Reed-Warblers & Allies (61)
151	Cracticidae	Bellmagpies & Allies (13)	198	Locustellidae	Grassbirds & Allies (61)
152	Pityriaseidae	Bristlehead (1)	199	Donacobiidae	Donacobius (1)
153	Aegithinidae	Ioras (4)	200	Bernieridae	Malagasy Warblers (11)
154	Campephagidae	Cuckooshrikes (87)	201	Cisticolidae	Cisticolas & Allies (145)
155	Neosittidae	Sittellas (2)	202	Sylviidae	Sylviid Warblers (33)
156	Eulacestomatidae	Ploughbill (1)	203	Paradoxornithidae	Parrotbills, Wrentit, & Allies (36)
157	Falcunculidae	Shrike-tit (1)	204	Zosteropidae	Yuhinas, White-eyes, & Allies (130)
158	Pachycephalidae	Whistlers & Allies (56)	205	Timaliidae	Tree- & Scimitar-Babblers & Allies (52)
159	Rhagologidae	Mottled Berryhunter (1)	206	Pellorneidae	Ground Babblers & Allies (58)
160	Oreoicidae	Australo-Papuan Bellbirds (3)	207	Leiothrichidae	Laughingthrushes & Allies (146)
161	Platylophidae (new)	Crested Shrikejay (1)	208	Promeropidae	Sugarbirds (2)

No.	Family	Members	No.	Family	Members
	PASSERIFORMES (continued)			PASSERIFORMES (continued)	
209	Modulatricidae	Dapple-throat and Allies (3)	231	Fringillidae	Finches, Euphonias, & Allies (225)
210	Irenidae	Fairy-bluebirds (2)	232	Calcariidae	Longspurs & Snow Buntings (6)
211	Hyliotidae	Hyliotas (4)	233	Rhodinocichlidae	Thrush-Tanager (1)
212	Muscicapidae	Old World Flycatchers (317)	234	Emberizidae	Old World Buntings (44)
213	Turdidae	Thrushes & Allies (171)	235	Passerellidae	New World Sparrows (130)
214	Mimidae	Mockingbirds & Thrashers (34)	236	Calyptophilidae	Chat-Tanagers (2)
215	Sturnidae	Starlings (122)	237	Phaenicophilidae	Hispaniolan Tanagers (4)
216	Buphagidae	Oxpeckers (2)	238	Nesospingidae	Puerto Rican Tanager (1)
217	Chloropseidae	Leafbirds (11)	239	Spindalidae	Spindalises (4)
218	Dicaeidae	Flowerpeckers (47)	240	Zeledoniidae	Wrenthrush (1)
219	Nectariniidae	Sunbirds & Spiderhunters (139)	241	Teretistridae	Cuban Warblers (2)
220	Prunellidae	Accentors (13)	242	Icteriidae	Yellow-breasted Chat (1)
221	Motacillidae	Wagtails & Pipits (67)	243	Icteridae	Troupials & Allies (105)
222	Urocynchramidae	Przevalski's Pinktail (1)	244	Parulidae	New World Warblers (110)
223	Elachuridae	Spotted Elachura (1)	245	Mitrospingidae	Mitrospingid Tanagers (2)
224	Bombycillidae	Waxwings (3)	246	Cardinalidae	Cardinals & Allies (49)
225	†Mohoidae	Hawaiian Honeyeaters (5) [extinct]	247	Thraupidae	Tanagers & Allies (377)
226	Ptilonotidae	Silky-flycatchers (4)	248	Passeridae	Old World Sparrows (42)
227	Dulidae	Palmchat (1)	249	Ploceidae	Weavers & Allies (116)
228	Hylocitridae	Hylocitrea (1)	250	Estrildidae	Waxbills & Allies (140)
229	Hypocoliidae	Hypocolius (1)	251	Viduidae	Indigobirds (20)
230	Peucedramidae	Olive Warbler (1)			

Reference: Clements, J. F., T. S. Schulenberg, M. J. Iliff, D. Roberson, T. A. Fredericks, B. L. Sullivan, and C. L. Wood. 2018. The eBird/Clements checklist of birds of the world: v2018. Downloaded from <http://www.birds.cornell.edu/clementschecklist/download/>

Changes Affecting Birds on Stamps

Velvet Scoter has been split from White-winged Scoter (see New Birds).

Change Southern Crowned-Pigeon, *Goura scheepmakeri* to Sclater's Crowned-Pigeon, *Goura sclateri*.

Purple-backed Fairywren (2001 & 2002 Australian issues—see New Birds) has been split from Variegated Fairywren (issues from Australia 1942, Micronesia, and Niue).

Taiwan Thrush, *Turdus niveiceps*, has been split from Island Thrush (see New Birds).

Chivi Vireo, *Vireo chivi* (Venezuela issue—see New Birds), has been split from Red-eyed Vireo (issues from Grenada and Grenadines).

Eurasian Magpie has been split into four species, two of which are on stamps: Oriental Magpie (Cambodia, China, Gambia, Hong Kong, Japan, Kampuchea, South Korea, and Sierra Leone—see New Birds) and Eurasian Magpie (all other issues).

Individual Changes:

Change Firecrest to Common Firecrest.

Change Nightingale Finch to Inaccessible Island Finch.

Change Rufous-vented Prinia to *Laticilla burnesii* and move it to Family Pellorneidae.

Move Grandala to Family Turdidae.

Move Bristlehead to Family Pityriasisidae.

Change Radjah Shelduck to *Radjah radjah*.

Individual Changes: (continued)

Change the content of Passerellidae to New World Sparrows.
Change White-eyed Duck to Hardhead.
Change Zoe Imperial Pigeon to Zoe's Imperial Pigeon.
Change Ruwenzori Turaco to Rwenzori Turaco.
Ferruginous-backed Antbird, *Myrmoderus ferrugineus*.
African Crake, *Crex egregia*.
Slaty-breasted Rail, *Lewinia striata*.
Invisible Rail, *Gallirallus wallacii*.
Woodford's Rail, *Gallirallus woodfordi*.
Bar-winged Rail, *Gallirallus poecilopterus*.
Change Black-shouldered Rail to Black-winged Rail.
Change Australian Kite to Black-shouldered Kite.
Change Black-shouldered Kite to Black-winged Kite.
Change Great Philippine Eagle to Philippine Eagle.
Change Frances's Hawk to Frances's Sparrowhawk.
Change Madagascar Red Owl to Red Owl.
White-browed Owl, *Athene superciliaris*.
Change African Long-eared Owl to Abyssinian Owl.
Change Madagascar Long-eared Owl to Madagascar Owl.
Change Cuckoo-Roller to Cuckoo-roller.
Middle-spotted Woodpecker, *Dendrocoptes medius*.
Brown-fronted Woodpecker, *Dendrocoptes auriceps*.
Arabian Woodpecker, *Dendrocoptes dora*.
Bearded Woodpecker, *Chloropicus namaquus*.
Change Gray Woodpecker to African Gray Woodpecker, *Chloropicus goertae*.
Change Gray-headed Woodpecker to Mountain Woodpecker, *Chloropicus spodocephalus*.
Okinawan Woodpecker, *Dendrocopus noguchii*.
Lesser-spotted Woodpecker, *Dryobates minor*.
Downy Woodpecker, *Dryobates pubescens*.
Red-cockaded Woodpecker, *Dryobates borealis*.
Hairy Woodpecker, *Dryobates villosus*.
Golden-collared Woodpecker, *Dryobates cassini*.
Dot-fronted Woodpecker, *Dryobates frontalis*.
Blood-colored Woodpecker, *Dryobates sanguineus*.
Banded Woodpecker, *Chrysophlegma miniaceum*.
Greater Yellownape, *Chrysophlegma flavinucha*.
Change Vasa Parrot to Greater Vasa Parrot.
Change Black Parrot to Lesser Vasa Parrot.
Seychelles Parrot, *Coracopsis barklyi*.
Change Sunbird Asity to Common Sunbird-Asity.
Change Macgregor's Bowerbird to MacGregor's Bowerbird.
Change Ruwenzori Batis to Rwenzori Batis.
Change Gray Jay to Canada Jay.
Change Vogelkop Bird-of-Paradise to Vogelkop Lophorina.
Change Greater Bird-of-Paradise to Greater Lophorina.
Change Lesser Bird-of-Paradise to Lesser Lophorina.
Change Greater Striped-Swallow to Greater Striped Swallow.
Change Lesser Striped-Swallow to Lesser Striped Swallow.
Change Black-lored Tit to Himalayan Black-lored Tit.
Black-crested Bulbul, *Rubigula flaviventris*.
Black-capped Bulbul, *Rubigula melanicterus*.

Individual Changes: (continued)

Black-collared Apalis, *Oreolais pulchra*.

Change Sukatchev's Laughingthrush to Snowy-cheeked Laughingthrush.

Choco Alethe, *Chamaetylas choloensis*.

Seaside Sparrow, *Ammodramus maritimus*.

Saltmarsh Sparrow, *Ammodramus caudatus*.

Red-breasted Meadowlark, *Leistes militaris*.

Greater Antillean Bullfinch, *Melopyrrha violacea*.

Change Española Cactus-finch to Española Ground-Finch.

Russet Sparrow, *Passer cinnamomeus*.

Change Rock Petronia to Rock Sparrow.

Change Social Weaver to Sociable Weaver.

2019–20 FEDERAL DUCK STAMP ART

On 15 September 2018, a panel of five judges chose an acrylic painting of a wood duck and decoy by Scot Storm as the winner of the 2018 Federal Duck Stamp Contest.

This is the second contest win for Storm, an artist from Freeport, Minnesota, whose artwork previously appeared on the 2004–05 stamp. Storm's winning art will grace the 2019–20 Federal Duck Stamp, which will raise tens of millions of dollars for habitat conservation after it goes on sale in June 2019.

Formally known as Hunting Permit Stamps, duck stamps are conservation revenue stamps. Ninety-eight percent of the purchase price goes directly to help acquire and protect wetland habitat and purchase conservation easements for the National Wildlife Refuge System. Wetlands acquired with duck stamp dollars help purify water, aid in flood control, reduce soil erosion and sedimentation, and enhance outdoor recreation opportunities.



Wood Duck, *Aix sponsa* (♂)
art by Scot Storm of Freeport, Minnesota
winner of 2018 Duck Stamp Contest



Mallards, *Anas platyrhynchos* (♂ & ♀)
art by Bob Hautmann of Delano, Minnesota
USA, 2018, Sc#RW85

While waterfowl hunters 16 years of age or older are required to purchase them, anyone can contribute to conservation by buying duck stamps. In addition to serving as hunting license and conservation tool, a current Federal Duck Stamp is also a free pass into any national wildlife refuge that charges an entry fee.

Because nearly all of the proceeds are used to conserve habitat for birds and other wildlife, birders, nature photographers and other outdoor enthusiasts buy duck stamps to help ensure that they can always see wildlife at their favorite outdoors spots.

In addition to being the only conservation revenue stamp, the duck stamp is unique in the way it is created. Each year, the U.S. Fish & Wildlife Service holds an art contest, the only juried art competition sponsored by the federal government. Any artist 18 years or older may enter, and the winning artist sees his or her work featured as the design on the following year's stamp.



HERPETOLOGY

Associate Editor

Dick Roman, LM83

New Listings



[Ed. Note: Occasionally in this section and also in the Fungi section, we will note a species that is known to be poisonous or venomous by marking it with a (☞) symbol. One should not infer that other species that are not so marked are non-poisonous or non-venomous or safe to handle/eat.]

Scott#	Denom	Common Name/Scientific Name	Family/Subfamily	Code
AUSTRALIA 2017 October 17 (Items Starting w/ Same Letter) (Set/5, Strip/5, Bklt/10)				
4698	\$1	Cartoon gecko (letter G) (perf 14¾×14)		S C
4703	\$1	Cartoon gecko (letter G) (die cut 11¼) (s/a)		S C
4703a		Bklt/10 (Sc#4703)		
4706b		Strip/5 (Sc#4702–06)		
BERMUDA 2018 March 22 (Turtles) (Set/4 & SS/2)				
1136	50c	Green Turtle, <i>Chelonia mydas</i>	Cheloniidae	A
1137	\$1.15	Hawksbill Sea Turtle, <i>Eretmochelys imbricata</i>	Cheloniidae	A
1138	\$1.35	Loggerhead Sea Turtle, <i>Caretta caretta</i>	Cheloniidae	A
1139	\$1.55	Leatherback Sea Turtle, <i>Dermochelys coriacea</i>	Dermochelyidae	A
1140a	SS 10c	Green Sea Turtle, <i>Chelonia mydas</i> (head)	Cheloniidae	A
1140b	SS \$1.35	Hawksbill Sea Turtle, <i>Eretmochelys imbricata</i> (head)	Cheloniidae	A
CARIBBEAN NETHERLANDS 2017 November 27 (Endangered Animals (SS/1) (inscr. Sint Eustatius)				
90	SS \$11.49	Lesser Antillean Iguana, <i>Iguana delicatissima</i> (also LL margin)	Iguanidae, Iguania	A Z
CHINA (Taiwan) 2018 June 26 (Marine Life) (SS/2)				
4420b	SS \$13	Green Sea Turtle, <i>Chelonia mydas</i>	Cheloniidae	A
DJIBOUTI 2018 February 19 (Marine Life) (MS/4 & SS/1)				
1365a	240fr	Hawksbill Sea Turtle, <i>Eretmochelys imbricata</i>	Cheloniidae	A
1384	Margin	Bot: Loggerhead Sea Turtle, <i>Caretta caretta</i>	Cheloniidae	Z
2018 March 15 (Fauna) (MS/4 & 3ea SS/1)				
1397a	240fr	Diamondback Terrapin, <i>Malaclemys terrapin</i>	Emydidae, Deirochelyinae	A
1397b	240fr	Blanding's Turtle, <i>Emydoidea blandingii</i>	Emydidae, Emydinae	A
1397c	240fr	False Map Turtle, <i>Graptemys pseudogeographica</i>	Emydidae, Deirochelyinae	A
1397d	240fr	Leopard Tortoise, <i>Stigmochelys pardalis</i>	Testudinidae	A
1415	SS 950fr	Green Sea Turtle, <i>Chelonia mydas</i>	Cheloniidae	A
	Margin	R & Bot: Alligator Snapping Turtle, <i>Macrochelys temminckii</i>	Chelydridae	Z
1416	SS 950fr	Golden Toad, <i>Incilius periglenes</i>	Bufoidea	A
1417	SS 950fr	Wood Frog, <i>Rana sylvatica</i> (w/ mushroom)	Ranidae	A
ECUADOR 2017 November 27 (Tourism) (Bklt/8)				
2203d	50c	South American River Turtle, <i>Podocnemis expansa</i>	Podocnemididae	B
2203		Bklt/8 (Sc#2203a–h)		
GERMANY 2018 February 1 (<i>The Frog Prince</i>) (Set/4 & Bklt/10)				
B1137	70c+30c	Stylized frog holding golden ball (perf 13¾)		S
B1138	85c+40c	Stylized frog holding eating utensils (perf 13¾)		S
B1139	145c+55c	Stylized frog sleeping (perf 13¾)		S
B1140	70c+30c	Stylized frog holding golden ball (die cut 10¼) (s/a) (also issued in coils)		S

GERMANY (continued)

B1140a Bklt/10+3 stickers (Sc#1140)

GREAT BRITAIN**2018 April 17** (Reintroduced Species) (Set/6)

3718 £1.45 Pool Frog, *Pelophylax lessonae* Ranidae A
 3718a Horiz pair (Sc#3717–18)
 3720 £1.55 Sand Lizard, *Lacerta agilis* Lacertidae A
 3720a Horiz pair (Sc#3719–20)

GREAT BRITAIN (Jersey)**2018 May 25** (150th anniv. Jersey SPCA) (Set/8)

2142 76p U/I snake Boidae A

IRELAND**2018 February 22** (St. Patrick's Day) (Single)

2179 €1.35 Stylized snake S C

KAZAKHSTAN**2018 January 1** (New Year: Year of the Dog) (SS/1) (round)

846 Margin LL: U/I snake (Zodiac) C Z

MALDIVIVE ISLANDS**2015 July 1** (Jacques-Yves Cousteau) (MS/4)3428a 20r Green Sea Turtle, *Chelonia mydas* Cheloniidae B**2015 August 10** (Sea Turtles) (MS/4 & SS/1)

3460a 22r Kemp's Ridley Sea Turtle, *Lepidochelys kempii* Cheloniidae A
 3460b 22r Olive Ridley Sea Turtle, *Lepidochelys olivacea* Cheloniidae A
 3460c 22r Loggerhead Sea Turtle, *Caretta caretta* Cheloniidae A
 3460d 22r Green Sea Turtle, *Chelonia mydas* Cheloniidae A
 3460 Margin UR: Green Sea Turtle, *Chelonia mydas* Cheloniidae Z
 3470 SS 70r Hawksbill Sea Turtle, *Eretmochelys imbricata* Cheloniidae A
 Margin UR: Green Sea Turtle, *Chelonia mydas* Cheloniidae Z
 MR: Flatback Sea Turtle, *Natator depressus* Cheloniidae Z
 LR: Kemp's Ridley Sea Turtle, *Lepidochelys kempii* Cheloniidae Z
 Bot: Hawksbill Sea Turtle, *Eretmochelys imbricata* Cheloniidae Z

2016 May 23 (Turtles) (MS/4 & SS/1)

3611a 22r Blanding's Turtle, *Emydoidea blandingii* Emydidae, Emydinae A
 3611b 22r Painted Wood Turtle, *Rhinoclemmys pulcherrima* Geoemydidae A
 3611c 22r Painted Turtle, *Chrysemys picta* Emydidae, Deirochelyinae A
 3611d 22r Spotted Turtle, *Clemmys guttata* Emydidae A
 3620 SS 70r Hawksbill Sea Turtle, *Eretmochelys imbricata* Cheloniidae A
 Margin Bot: Loggerhead Sea Turtle, *Caretta caretta* Cheloniidae Z
 ML: Painted Wood Turtle, *Rhinoclemmys pulcherrima* Geoemydidae Z
 MR: Green Sea Turtle, *Chelonia mydas* Cheloniidae Z

MONACO**2018 March 7** (Sea Turtle Care Center) (Single)

2921 €1.20 U/I sea turtles U B

MONTSEERRAT**2018 March 1** (Frogs & Toads of Montserrat) (MS/4 & SS/1)

1404a \$5 Cane Toad, *Rhinella marina* Bufonidae A
 1404b \$6 Johnstone's Whistling Frog, *Eleutherodactylus johnstonei* Eleutherodactylidae A
 (Cap: Lesser Antillean Frog) (this whistling frog is most common in the Caribbean)
 1404c \$7 Cane Toad, *Rhinella marina* Bufonidae A
 1404d \$8 Johnstone's Whistling Frog, *Eleutherodactylus johnstonei* Eleutherodactylidae A
 1405 SS \$10 Giant Ditch Frog/Mountain Chicken, *Leptodactylus fallax* Leptodactylidae A

NEW ZEALAND**2018 August 1** (Native Animals Threatened by Predators) (Set/5 & SS/5)

2812 \$1.20 Hochstetter's Frog, *Leiopelma hochstetteri* Leiopelmatidae C
 2813 \$2.40 Jeweled Gecko, *Strophurus elderi* Diplodactylidae C

NEW ZEALAND (continued)

2815a SS/5 (Sc#2811–15)

PERU**2017 June (Turtle)**1932 5s Yellow-spotted Amazon River Turtle, *Podocnemis unifilis* Podocnemididae A**2018 February 9 (New Year: Year of Rooster) (Pair)**

1958a 10s Stylized snake (Zodiac) C

SAN MARINO**2018 June 5 (Postal Services) (Set/3)**

2018 €1.60 Cartoon frog delivering letter to fish S C

SIERRA LEONE**2017 March 30 (Fauna) (MS/4 & SS/1)**4178a 9800le Muger Crocodile/Swamp Crocodile, *Crocodylus palustris* Crocodylidae A4178b 9800le West African Dwarf Crocodile, *Osteolaemus tetraspis* Crocodylidae A4178c 9800le Nile Crocodile, *Crocodylus niloticus* (facing R) Crocodylidae A4178d 9800le Nile Crocodile, *Crocodylus niloticus* (facing L) Crocodylidae A4178 Margin UL & LR: Nile Crocodile, *Crocodylus niloticus* Crocodylidae Z4197 SS 40000le Nile Crocodile, *Crocodylus niloticus* Crocodylidae A

Margin Bot: Same species Crocodylidae Z

4179a 9800le Hawksbill Sea Turtle, *Eretmochelys imbricata* Cheloniidae A4179b 9800le African Mud Turtle, *Pelusios castaneus* Pelomedusidae A4179c 9800le Leatherback Sea Turtle, *Dermochelys coriacea* Dermochelyidae A4179d 9800le Green Sea Turtle, *Chelonia mydas* Cheloniidae A4179 Margin Corners: Green Sea Turtle, *Chelonia mydas* Cheloniidae Z4198 SS 40000le Green Sea Turtle, *Chelonia mydas* Cheloniidae A

Margin Top & LR: Same species Cheloniidae Z

ML: Loggerhead Sea Turtle, *Caretta caretta* Cheloniidae Z**2017 March 30 (Indonesian Animals) (SS/2)**4206a SS 20000le Komodo Dragon, *Varanus komodoensis* Varanidae, Platynota A**2017 May 30 (Steve Irwin) (Set/4 & SS/1)**4331 6600le American Alligator, *Alligator mississippiensis* (w/ daughter) Alligatoridae B4332 6600le American Alligator, *Alligator mississippiensis* Alligatoridae B

4334 6600le U/I snake B U

4335 SS 40000le Charles Island Giant Tortoise, *Chelonoidis nigra* ssp. *abingdonii* Testudinidae BMargin Top: Ball Python, *Python regius* Pythonidae ZR: American Alligator, *Alligator mississippiensis* Alligatoridae ZLR: Central Bearded Dragon, *Pogona vitticeps* Agamidae Z**2017 June 30 (Fauna) (MS/4 & SS/1)**4353a 9800le West African Dwarf Crocodile, *Osteolaemus tetraspis* Crocodylidae A4353b 9800le Nile crocodile, *Crocodylus niloticus* Crocodylidae A4353c 9800le Orinoco crocodile, *Crocodylus intermedius* Crocodylidae A4353d 9800le American crocodile, *Crocodylus acutus* Crocodylidae A4373 40000le Saltwater crocodile, *Crocodylus porosus* (also Bot margin) Crocodylidae A Z4354a 9800le Gunther's Whip Snake, *Ahaetulla prasina* Colubridae, Colubrinae A

(also called Oriental Whipsnake, Asian Vine Snake, Jade Vine Snake)

4354b 9800le Sumatra Pit Viper *Trimeresurus sumatranus* (♂) Viperidae, Crotalinae A4354c 9800le Scarlet Kingsnake, *Lampropeltis triangulum* Colubridae, Colubrinae A

(also called Louisiana Milksnake, Mexican Milksnake)

4354d 9800le Blue Malaysian Coral Snake, *Calliophis bivirgata* (♂) Elapidae A4354 Margin UR: Daudin's Bronzeback, *Dendrelaphis tristis* Colubridae Z4374 SS 40000le Green Tree Python, *Morelia viridis* Pythonidae, Henophidia AMargin UR: Red Bamboo Snake, *Oreocryptophis porphyraceus* Colubridae Z

SIERRA LEONE (continued)

		LL: Eastern Indigo Snake, <i>Drymarchon couperi</i>	Colubridae	Z
		Bot: Grass Snake, <i>Natrix natrix</i>	Colubridae	Z
		LR: Amazon Tree Boa, <i>Corallus hortulanus</i>	Boidae	Z
4355a	9800le	Green Sea Turtle, <i>Chelonia mydas</i>	Cheloniidae	A
4355b	9800le	Leatherback Sea Turtle, <i>Dermochelys coriacea</i>	Dermochelyidae	A
4355c	9800le	Diamondback Terrapin, <i>Malaclemys terrapin</i>	Emydidae	A
4355d	9800le	Loggerhead Sea Turtle, <i>Caretta caretta</i>	Cheloniidae	A
4375	SS 40000le	Olive Ridley Sea Turtle, <i>Lepidochelys olivacea</i>	Cheloniidae	A
	Margin	UR: Leatherback Sea Turtle, <i>Dermochelys coriacea</i>	Dermochelyidae	Z
		LL & LR: Loggerhead Sea Turtle, <i>Caretta caretta</i>	Cheloniidae	Z

2017 August 30 (135th anniv. Charles Darwin) (MS/4 & SS/1)

4430d	9800le	Charles Island Giant Tortoise, <i>Chelonoidis nigra</i>	Testudinidae	B
4449	Margin	ML: Marine Iguana, <i>Amblyrhynchus cristatus</i>	Iguanidae	Z

2017 September 29 (Turtles) (MS/4 & SS/1)

4471a	9800le	Texas (Gopher) Tortoise, <i>Gopherus berlandieri</i>	Testudinidae	A
4471b	9800le	Red-footed Tortoise, <i>Chelonoidis carbonaria</i>	Testudinidae	A
4471c	9800le	Egyptian Tortoise, <i>Testudo kleinmanni</i>	Testudinidae	A
4471d	9800le	Travancore Tortoise, <i>Indotestudo forstenii</i>	Testudinidae	A
4471	Margin	LR: Indian Star Tortoise, <i>Geochelone elegans</i>	Testudinidae	Z
4491	SS 40000le	Hermann's Tortoise, <i>Testudo hermanni</i>	Testudinidae	A
	Margin	Bot: Texas (Gopher) Tortoise, <i>Gopherus berlandieri</i>	Testudinidae	Z

2017 December 29 (Lizards) (MS/4 & SS/1)

4598a	9800le	Nile Monitor, <i>Varanus niloticus</i>	Varanidae, Platynota	A
4598b	9800le	Slender Chameleon, <i>Chamaeleo gracilis</i>	Chamaeleonidae	A
4598c	9800le	Common Agama, <i>Agama agama</i>	Agamidae, Agaminae	A
4598d	9800le	Brook's House Gecko, <i>Hemidactylus angulatus</i>	Gekkonidae	A
4618	SS 40000le	Common Agama, <i>Agama agama</i>	Agamidae, Agaminae	A
	Margin	LR: Nile Monitor, <i>Varanus niloticus</i>	Varanidae, Platynota	Z

SLOVENIA**2018 May 25** (Blind Cave Salamander) (Single)

1274	€1.77	Olm, <i>Proteus anguinus</i>	Proteidae, Proteinae	A
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SURINAM**2017 November 15** (Frogs) (MS/6)

1514a	\$3	Splendid Leaf Frog, <i>Cruziohyla calcarifer</i>	Hylidae, Phyllomedusinae	A
1514b	\$5	Map Tree Frog, <i>Hyla geographica</i>	Hylidae, Hylinae	A
1514c	\$6	Highland Tree Frog, <i>Litoria wollastoni</i>	Hylidae, Hylinae	A
1514d	\$7	Malayan Horned Frog, <i>Megophrys nasuta</i>	Megophryidae	A
1514e	\$8	American Bullfrog, <i>Rana catesbeiana</i>	Ranidae	A
1514f	\$9	Harlequin Tree Frog, <i>Rhacophorus pardalis</i>	Rhacophoridae, Rhacophorinae	A

2017 December 19 (Flora & Fauna) (12ea SS/1)

1517	\$5	Centralian Carpet Python, <i>Morelia bredli</i>	Pythonidae, Henophidia	A
1519	\$5	American Bullfrog, <i>Rana catesbeiana</i>	Ranidae	A

SWITZERLAND**2018 September 6** (Fairy Tale Characters) (Set/2)

1689	100c	Cartoon frog (Character in Forest)		S B
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TONGA**2017 August 31** (50th anniv. Peace Corps in Tonga) (Set/4)

1326	2.25pa	Stylized turtle		S
1327	6.50pa	Stylized turtle		S
1328	6.50pa	Stylized turtle		S
1329	8.00pa	Stylized turtle		S



MARINE INVERTEBRATES



Editor

Ian Hunter, BU1619

New Listings

Scott#	Denom	Common Name/Scientific Name	Family/Subfamily	Code
AUSTRALIA				
2018 August 1 (Reef Safari) (Set/5, SS/5, Bklt)				
4827	\$1	Chambered Nautilus, <i>Nautilus pompilius</i>	Nautilidae	A
4827a		Bklt/4 (Sc#4827) (w/ white frames) (perf 14×14¾)		
4832		SS/5 (Sc#4832a–e) (w/o white frames)		
4832a	\$1	Chambered Nautilus, <i>Nautilus pompilius</i>	Nautilidae	A
4833	\$1	Chambered Nautilus, <i>Nautilus pompilius</i>	Nautilidae	A
4836a		Bklt/10 (3ea Sc#4833–34, 2ea Sc#4835–36) (die cut 11¼) (s/a) (w/ white frame)		
4836b		Bklt/20 (5ea Sc#4833–36) (die cut 11¼) (s/a) (w/ white frame)		
CARIBBEAN NETHERLANDS				
2018 April 3 (Tropical Shells) (MS/4) (inscr. “Bonaire”)				
97a	99c	U/I shells (two shells-large shell on top) (also on Bot margin)		U Z
97b	99c	U/I shells (four shells) (also on Bot margin)		U Z
97c	99c	U/I shells (three shells) (also on Bot margin)		U Z
97d	99c	U/I shells (two shells-large shell on bottom) (also on Bot margin)		U Z
CARIBBEAN NETHERLANDS				
2018 April 3 (Tropical Shells) (MS/4) (inscr. “Saba”)				
98a	99c	U/I shells (four shells-two on third row) (also on Bot margin)		U Z
98b	99c	U/I shells (four shells-zigzag pattern) (also on Bot margin)		U Z
98c	99c	U/I shells (two small shells) (also on Bot margin)		U Z
98d	99c	U/I shells (two large shells) (also on Bot margin)		U Z
CARIBBEAN NETHERLANDS				
2018 April 3 (Tropical Shells) (MS/4) (inscr. “Sint Eustatius”)				
99a	99c	U/I shells (two shells-large shell on top) (also on Bot margin)		U Z
99b	99c	U/I shells (three shells) (also on Bot margin)		U Z
99c	99c	U/I shells (two similar size shells) (also on Bot margin)		U Z
99d	99c	U/I shells (two shells-large shell on bottom) (also on Bot margin)		U Z
CHINA (Taiwan)				
2018 July 28 (Corals Type of 2014) (Set/4)				
4425	\$6	Porcelain Coral, <i>Leptoseris yabei</i>	Agariciidae	A
4426	\$6	Colonial Soft Coral, <i>Clavularia viridis</i>	Clavulariidae	A
4427	\$15	Cabbage Leather Coral, <i>Lobophytum crassum</i>	Alcyoniidae	A
4428	\$15	an Octocoral, <i>Melithaea formosa</i>	Melithaeidae	A
FIJI				
2017 May 19 (Great Sea Reef) (Set/4)				
1376	62c	U/I branching coral		U
1377	85c	U/I boulder coral		U
1378	\$1.04	U/I soft coral		U
1379	\$15	U/I plate coral (w/ SCUBA diver)		U
FRANCE				
2018 May 4 (Flower Arrangements) (Bklt/10) (Red Cross)				
B776	(80c+20c)	U/I shell (w/ Anemone flowers)		U B
B781	(80c+20c)	U/I shell (w/ Ranunculus flowers)		U B
B785	(80c+20c)	U/I snail (w/ Zinnia flowers)		U B
B785a		Bklt/10 (Sc#B776–85)		

LIBERIA		2015 December 31 (Seashells & Marine Life) (MS/4, MS/6, SS/1)		
3099a	\$100	Horse Conch Shell, <i>Triplofusus papillosus</i>	Fascioliariidae	A
3099b	\$100	Mushroom Coral, <i>Fungia scutaria</i>	Fungiidae	A
3099c	\$100	Chambered Nautilus, <i>Nautilus pompilius</i>	Nautilidae	A
3099d	\$100	Green Sea Urchin, <i>Strongylocentrotus droebachiensis</i>	Strongylocentrotidae	A
3099	Margin	R: U/I shells		U Z
3100a	\$100	Common Atlantic Cerith, <i>Cerithium vulgatum</i>	Cerithiidae	A
3100b	\$100	Triton's Trumpet, <i>Charonia tritonis</i>	Ranellidae	A
3100c	\$100	Tiger Cowrie, <i>Cypraea tigris</i>	Cypraeidae	A
3100d	\$100	Giant African Snail, <i>Achatina achatina</i>	Achatinidae	A
3100e	\$100	Chambered Nautilus, <i>Nautilus pompilius</i>	Nautilidae	A
3100f	\$100	Banded Bonnet, <i>Phalium bandatum</i>	Cassidae	A
3100	Margin	Bot: U/I shells		U Z
3101	SS \$350	South African Scallop, <i>Pecten sulcicostatus</i>	Pectinidae	A
	Margin	Bot: U/I shells		U Z
MALDIVE ISLANDS		2016 May 23 (Shells) (MS/4 & SS/1)		
3610a	22r	Gold-banded Volute, <i>Harpulina arausiaca</i>	Volutidae	A
3610b	22r	Venus Comb Murex, <i>Murex pecten</i>	Muricidae	A
3610c	22r	a Triton Shell, <i>Ranularia</i> sp. (Cap: <i>R. Schumacher</i>)	Ranellidae	A
3610d	22r	Prickly Spotted Drupe, <i>Drupa ricinus</i>	Muricidae	A
3619	SS 70r	a Pelican's Foot Snail, <i>Aporrhais pesgallinae</i>	Aporrhaidae	A
	Margin	ML: Staghorn Murex, <i>Chicoreus cornucervi</i>	Muricidae	Z
		LL: True Tulip, <i>Fasciolaria tulipa</i>	Fascioliariidae	Z
		Bot: King Helmet, <i>Cassis tuberosa</i>	Cassidae	Z
		LR: Crowned Baler, <i>Melo aethiopica</i>	Volutidae	Z
		Top: Strawberry Hermit Crab, <i>Coenobita perlatus</i>	Coenobitidae	Z
NETHERLANDS		2017 July 17 (Art in Voorlinden Museum) (MS/10)		
1552d	(78c)	Stylized mussels (Broodthaers: "Casserole des Moules Noir")		S
NEVIS		2018 May 24 (Seashells) (MS/4)		
1949a	\$4	Variegated Scallop, <i>Chlamys varia</i> (small brown on L)	Pectinidae	A
1949b	\$4	Same species (small red on R)	Pectinidae	A
1949c	\$4	Same species (small pink on L)	Pectinidae	A
1949d	\$4	Same species (small brown on R)	Pectinidae	A
NEW ZEALAND		2018 August 1 (Animals Native to New Zealand) (SS/5)		
2815	\$3.60	Giant Snail, <i>Powelliphanta</i> sp. (w/ owl, kiwi, giant weta)	Rhytididae	U B
2815a		SS/5 (Sc#2811-15)		
PALAU		2018 February 1 (Seahorses) (MS/6)		
1379f	\$1.75	Gorgonian, <i>Muricella plectana</i>	Acanthogorgiidae	B
ROMANIA		2017 December 7 (Venomous Animals) (Set/5 & MS/5+label)		
6033	3.50l	Box Jellyfish, <i>Chironex fleckeri</i> (♀)	Chirodropidae	A
6033a		MS/5+label (Sc#6033)		
6035	4.50l	Blue-Ringed Octopus, <i>Hapalochlaena maculosa</i> (♀)	Octopodidae	A
6035a		MS/5+label (Sc#6035)		
ST. THOMAS AND PRINCE IS.		2014 September 15 (Seashells) (MS/4 & SS/1)		
2722a	25000d	Rough Scallop, <i>Aequipecten muscosus</i> (Cap: <i>Lindapecten m.</i>)	Pectinidae	A
2722b	25000d	U/I conch shell	Strombidae	U
2722c	25000d	U/I moon shell	Naticidae	U
2722d	25000d	Juno's Volute, <i>Scaphella junonia</i>	Volutidae	A
2722	Margin	Top: U/I seashells		U Z

ST. THOMAS AND PRINCE IS. (continued)

2742	SS 96000d	Chambered Nautilus, <i>Nautilus pompilius</i>	Nautilidae	A
	Margin	R: U/I conch shell	Strombidae	U Z

2014 October 15 (Corals)

2766a	25000d	Leaf Plate Montipora, <i>Montipora capricornis</i>	Acroporidae	A
2766b	25000d	Open Brain Coral, <i>Trachyphyllia geoffroyi</i>	Merulinidae	A
2766c	25000d	Deepwater Sea Fan, <i>Iciligorgia schrammi</i>	Anthothelidae	A
2766d	25000d	Briar Coral, <i>Anacropora puertogalerae</i>	Acroporidae	A
2786	SS 96000d	Fox Coral, <i>Nemanzophyllia turbida</i>	Euphyllidae	A
	Margin	UR: Orange Sun Coral, <i>Tubastrea aurea</i>	Dendrophyllidae	Z
		LR: Anchor Coral, <i>Euphyllia ancora</i>	Euphyllidae	Z

2014 November 11 (Most Venomous Animals) (MS/4 & SS/1)

2810d	25000d	Marbled Cone, <i>Conus marmoreus</i> (☞)	Conidae	A
2827	SS 96000d	Blue-Ringed Octopus, <i>Hapalochlaena maculosa</i> (☞)	Octopodidae	A
	Margin	R: Box Jellyfish, <i>Chironex fleckeri</i> (☞)	Chirodropidae	Z

2015 November 18 (Shells) (MS/4 & SS/1)

2969a	31000d	Chambered Nautilus, <i>Nautilus pompilius</i>	Nautilidae	A
2969b	31000d	Florida Fighting Conch, <i>Strombus alatus</i>	Strombidae	A
2969c	31000d	DeMarcoi's Volute, <i>Voluta polypeura</i>	Volutidae	A
2969d	31000d	Arthritic Spider Conch, <i>Harpago arthritica</i>	Strombidae	A
2969	Margin	UR & Bot: Spider Conch, <i>Lambis lambis</i>	Strombidae	Z
2988	SS 96000d	Redlined Bubble Snail, <i>Bullina lineata</i>	Bullinidae	A
	Margin	UL: U/I blue octopus		U Z
		UR: U/I jellyfish		U Z
		MR: Sea Snail, <i>Cypraecassis rufa</i>	Cassidae	Z
		LR: Spider Conch, <i>Lambis lambis</i>	Strombidae	Z
		Bot: U/I starfish		U Z
		Bot: U/I sea urchin		U Z

ST. VINCENT**2017 September 28 (Marine Life) (MS/3 & SS/1)**

4116a	\$7	U/I sea anemone	Order: Actiniaria	U
4116b	\$7	U/I sea anemone	Order: Actiniaria	U
4116c	\$7	U/I sea anemone	Order: Actiniaria	U
4116	Margin	Multiple U/I sea anemones	Order: Actiniaria	U Z
4117	SS \$15	U/I sea snails		U
	Margin	Multiple U/I sea snails		U Z

SAMOA**2016 March 18 (Surcharges)**

1238	\$15	Natives blowing Shell Trumpet (Sc#1020 surch)		C
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SIERRA LEONE**2017 January 30 (Renaissance Masterpieces) (MS/4)**

4089c	6000le	Stylized shell (Botticelli ptg: "The Birth of Venus")		S B
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2017 May 30 (20th anniv. Jacques-Yves Cousteau) (Set/4)

4327	6000le	Giant Pacific Octopus, <i>Enteroctopus dofleini</i>	Enteroctopodidae	B
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2017 June 30 (Shells) (MS/4 & SS/1)

4352a	9800le	Florida Crown Conch, <i>Melongena corona</i>	Melongenidae	A
4352b	9800le	Commercial Top Shell, <i>Trochus niloticus</i>	Tegulidae	A
4352c	9800le	Lightning Whelk, <i>Sinistrofulgur perversum</i>	Busyconidae	A
4352d	9800le	Wrinkled Neptune Shell, <i>Neptunea polycostata</i>	Buccinidae	A

SIERRA LEONE (continued)

4372	SS 40000le	Netted Dog Whelk, <i>Nassarius reticulatus</i>	Nassariidae	A
	Margin	UR: Sea Snail, <i>Euprotomus hawaiiensis</i>	Strombidae	Z
		LL: Queen Conch, <i>Lobatus gigas</i> (Cap: <i>Strombus gigas</i>)	Strombidae	Z
		LR: Bear Claw Clam, <i>Hippopus hippopus</i>	Tridacnidae	Z

TUVALU**2018 May 30** (Pacific Shrimp) (MS/4 & SS/2)

1417a	\$2.50	Cleaner Shrimp, <i>Lysmata amboinensis</i>	Hippolytidae	A
1417b	\$2.50	Emperor Shrimp, <i>Periclimenes imperator</i>	Palaemonidae	A
1417c	\$2.50	Camel Shrimp, <i>Rhynchocinetes durbanensis</i>	Rhynchocinetidae	A
1417d	\$2.50	Orange Snapping Shrimp, <i>Alpheus bisincisus</i>	Alpheidae	A
1417	Margin	Bot: U/I coral		U Z
1418a	SS \$3.70	Peacock Mantis Shrimp, <i>Odontodactylus scyllarus</i>	Odontodactylidae	A
1418b	SS \$3.70	Modest Snapping Shrimp, <i>Synalpheus modestus</i>	Alpheidae	A
1418	Margin	Bot: U/I coral		U Z

2018 May 30 (Coconut Crabs) (MS/4 & SS/2)

1419a	\$1	Coconut Crab, <i>Birgus latro</i>	Coenobitidae	A
1419b	\$2	Same species	Coenobitidae	A
1419c	\$3	Same species	Coenobitidae	A
1419d	\$4	Same species	Coenobitidae	A
1420a	SS \$3	Coconut Crab, <i>Birgus latro</i>	Coenobitidae	A
1420b	SS \$4	Same species	Coenobitidae	A

UNDERWATER WORLD OF HONG KONG

Hong Kong Post plans to issue a set of stamps on 16 July 2019, featuring Hong Kong's rich marine biodiversity. The set will include six stamps depicting various sea creatures along with miniature sheets of four of each design and a special fish-shaped souvenir sheet including all six designs in a se-tenant format.

The stamps were designed by Shirman Lai. The six MS/4 are the first of their kind for the Hong Kong Post.

The colorful set aims to promote awareness for marine conservation in the hope of making joint efforts to preserve local marine life.

Among other species, the stamps feature the Chinese White Dolphin (*Sousa chinensis*), Green Sea Turtle (*Chelonia mydas*), various reef fish, a stingray, seahorses, corals, and a jellyfish.





ICHTHYOLOGY

Editor

J. Dale Shively, BU1832

New Listings



Scott#	Denom	Common Name/Scientific Name	Family/Subfamily	Code
AUSTRALIA		2018 August 1 (Reef Safari) (Bklt/4 & SS/5)		
4828	\$1	U/I reef fish (w/ Green Sea Turtle)		U C
4828a		Bklt/4 (Sc#4828) (perf 14×14¾) (white frame on two sides)		
4830	\$1	Emperor Angelfish, <i>Pomacanthus imperator</i> (adult & juvenile)	Pomacanthidae	A
4830a		Bklt/4 (Sc#4830) (perf 14×14¾) (white frame on two sides)		
4831	\$2	Grey Reef Shark, <i>Carcharhinus amblyrhynchos</i>	Carcharhinidae	A
		Remora, <i>Remora remora</i>	Echeneidae	B
4831a	\$2	Bklt/2 (Sc#4831) (perf 14×14¾) (white frame on two sides) (SS/5) (w/o White Frame on 2 sides)		
4832b	\$1	U/I reef fish (w/ Green Sea Turtle) (w/o white frame)		U C
4832d	\$1	Emperor Angelfish, <i>Pomacanthus imperator</i> (w/o white frame)	Pomacanthidae	A
4832e	\$2	Grey Reef Shark, <i>Carcharhinus amblyrhynchos</i> (w/o wht frame)	Carcharhinidae	A
4832		SS/5 (Sc#4832a–e) (w/o white frame)		
	Margin	UR: Yellowtail snapper, <i>Ocyurus chrysurus</i>	Lutjanidae	Z
4834	\$1	U/I reef fish (w/ Green Sea Turtle)		U C
4836	\$1	Emperor Angelfish, <i>Pomacanthus imperator</i> (adult & juvenile)	Pomacanthidae	A
4836a		Bklt/10 (3ea Sc#4833–34, 2ea Sc#4835–36) (die cut 11¼) (s/a) (w/ white frame)		
4836b		Bklt/20 (5ea Sc#4833–36) (die cut 11¼) (s/a) (w/ white frame)		
BERMUDA		2018 June 21 (Cedar-handled Handbags) (Set/4)		
1146	\$1.40	Fish lookalike carved into handle		X
1147	\$2	Fish lookalike (Seahorses) carved into handle		X
CANADA		2018 July 10 (Sharks) (MS/5 & Bklt/10)		
3105a	(85c)	Shortfin Mako Shark, <i>Isurus oxyrinchus</i>	Lamnidae	A
3105b	(85c)	Basking Shark, <i>Cetorhinus maximus</i>	Cetorhinidae	A
3105c	(85c)	Great White Shark, <i>Carcharodon carcharias</i>	Lamnidae	A
3105d	(85c)	Greenland Shark, <i>Somniosus microcephalus</i>	Somniosidae	A
3105e	(85c)	Blue Shark, <i>Prionace glauca</i>	Carcharhinidae	A
3105		MS/5 (Sc#3105a–e) (perf 12½)		
	Margin	UR: Great White Shark, <i>Carcharodon carcharias</i>	Lamnidae	Z
3106	(85c)	Great White Shark, <i>Carcharodon carcharias</i>	Lamnidae	A
3107	(85c)	Basking Shark, <i>Cetorhinus maximus</i>	Cetorhinidae	A
3108	(85c)	Greenland Shark, <i>Somniosus microcephalus</i>	Somniosidae	A
3109	(85c)	Blue Shark, <i>Prionace glauca</i>	Carcharhinidae	A
3110	(85c)	Shortfin Mako Shark, <i>Isurus oxyrinchus</i>	Lamnidae	A
3110a		Bklt/10 (2ea Sc#3106–10) (die cut 13½) (s/a)		
CHINA (People's Republic)		2018 March 2 (Lantern Festival) (Set/3)		
4515	\$1.20	Stylized Koi		S B
CHINA (Taiwan)		2018 June 26 (Marine Life) (SS/2)		
4420a	SS \$13	Blacktip Reef Shark, <i>Carcharhinus melanopterus</i> (two)	Carcharhinidae	A
4420		SS/2 (Sc#4420a–b)		
	Margin	U/I reef fish		U Z

DENMARK		2018 May 17 (Fish) (SS/2)		
1801a	27k	Northern Pike, <i>Esox lucius</i>	Esocidae	A
1801b	27k	European Perch, <i>Perca fluviatilis</i>	Percidae	A
1801	Margin	LL: Pike head line drawing		S Z
		LR: Perch spines line drawing		S Z
FIJI		2017 May 19 (Great Sea Reef) (Set/4)		
1376	62c	U/I reef fish in background		U C
1377	85c	U/I reef fish in background		U C
1378	\$1.04	U/I reef fish in background		U C
1379	\$15	U/I reef fish in background		U C
MACAO		2018 March 1 (2018 International Stamp Exhibition) (Strip/3)		
1523b	3p	Stylized fish (w/ fish vendor)		S
MALAWI		2018 June 4 (Birds) (SS/1)		
860	SS 450k	U/I fish (in Kingfisher's beak)		U C
MALAYSIA		2018 January 30 (Fish) (Set/3 & SS/1)		
1733	60c	Mahseer (Tor Barb), <i>Tor tor</i>	Cyprinidae	A
1734	60c	Pearl Gourami, <i>Trichopodus leerii</i>	Osphronemidae	A
1735	60c	Harlequin Rasbora, <i>Trigonostigma heteromorpha</i>	Cyprinidae	A
1736	SS \$5	Golden Arowana (Asian Bonytongue), <i>Scleropages formosus</i>	Osphronemidae	A
	Margin	L: Same species	Osphronemidae	Z
		2018 February 27 (Rivers) (SS/1)		
1739	SS \$8	Ikan Empurau (Semah Mahseer/Belian), <i>Tor douronensis</i>	Cyprinidae	B
	Margin	Bot: Same species	Cyprinidae	Z
MALDIVIVE ISLANDS		2015 July 1 (105th anniv. of Jacques-Yves Cousteau) (MS/4 & SS/1)		
3428b	20r	Emperor Angelfish, <i>Pomacanthus imperator</i> (w/ Cousteau)	Pomacanthidae	B
3428c	20r	Sand Tiger Shark, <i>Carcharias taurus</i> (w/ Cousteau)	Odontaspidae	B
3438	SS 60r	MR: Yellowtail (Clark's) Clownfish, <i>Amphiprion clarkia</i>	Pomacanthidae	Z
		LR: Maldivive Anemonefish, <i>Amphiprion nigripes</i>	Pomacentridae	Z
		2015 July 26 (50th anniv. Independence) (Set/6)		
3447	15r	Fishermen landing U/I Tuna on boat		U C
		2015 August 10 (Great White Shark Conservation) (MS/4 & SS/1)		
3459a	22r	Great White Shark, <i>Carcharodon carcharias</i> (two swimming R)	Lamnidae	A
3459b	22r	Same species (one swimming up)	Lamnidae	A
		Bkgrd: U/I small fish		U C
3459c	22r	Same species (one swimming R)	Lamnidae	A
		Bkgrd: U/I small fish		U C
3459d	22r	Same species (two swimming L)	Lamnidae	A
3459	Margin	UR: Same species	Lamnidae	Z
3469	SS 70r	Great White Shark, <i>Carcharodon carcharias</i>	Lamnidae	A
	Margin	R & Bot: Same species	Lamnidae	Z
		Bkgrd: U/I small fish	Lamnidae	Z
		2015 September 15 (Scouting in Maldives) (MS/4 & SS1)		
3500b	22r	Masked Bannerfish, <i>Heniochus monoceros</i> (w/ R. B. Powell)	Chaetodontidae	B
3500	Margin	Bkgrd: U/I tiny reef fish		U Z
3510	SS 70r	Masked Bannerfish, <i>Heniochus monoceros</i> (w/ Scouts in boat)	Chaetodontidae	B

MALDIVES ISLANDS (continued) 2015 December 2 (Baa Atoll UNESCO Biosphere) (Bklt/4)				
3511a	5l	Whale Shark, <i>Rhincodon typus</i>	Rhincodontidae	A
3511c	25l	Manta Ray (Giant Manta), <i>Mobula birostris</i>	Myliobatidae	A
3511	Margin	Bot: Longnose Butterflyfish, <i>Forcipiger flavissimus</i>	Chaetodontidae	Z
2015 December 9 (Maldive Fishes) (MS/4 & SS/1)				
3514a	20r	Twotone Tang, <i>Zebrasoma scopas</i>	Acanthuridae	A
3514b	20r	L: Yellowback Anthias, <i>Pseudanthias evansi</i>	Serranidae	A
		LR: Yellow Teardrop Butterflyfish, <i>Chaetodon interruptus</i>	Chaetodontidae	C
3514c	20r	Bot: Emperor Red Snapper, <i>Lutjanus sebae</i>	Lutjanidae	B
		Top: Yellow Teardrop Butterflyfish, <i>Chaetodon interruptus</i>	Chaetodontidae	B
3514d	20r	Ctr: Spotted Eagle Ray, <i>Aetobatus narinari</i>	Myliobatidae	A
		Bkgrd: Yellow Teardrop Butterflyfish, <i>Chaetodon interruptus</i>	Chaetodontidae	C
3514	Margin	UL: Powderblue Surgeonfish, <i>Acanthurus leucosternon</i>	Acanthuridae	Z
		Top: Orange-spine Tang (?), <i>Naso lituratus</i> (behind title)	Balistidae	Z
		LR: Pigmy Sweeper, <i>Parapriacanthus ransonneti</i>	Pempheridae	Z
		UR: Spotted Eagle Ray, <i>Aetobatus narinari</i>	Myliobatidae	Z
3524	SS 60r	Maldive Anemonefish, <i>Amphiprion nigripes</i>	Pomacentridae	A
	Margin	UL: Powderblue Surgeonfish, <i>Acanthurus leucosternon</i>	Acanthuridae	Z
		Top: Orange-spine Tang (?), <i>Naso lituratus</i> (behind title)	Balistidae	Z
		UR: Maldive Anemonefish, <i>Amphiprion nigripes</i>	Pomacentridae	Z
		LL: Clown Triggerfish, <i>Balistoides conspicillum</i>	Balistidae	Z
		LR: Spotted Eagle Ray, <i>Aetobatus narinari</i>	Myliobatidae	Z
2015 December 9 (Maldive Fishes) (MS/4 & SS/1)				
3515a	20r	Top: Longnose Butterflyfish, <i>Forcipiger flavissimus</i>	Chaetodontidae	B
		Bot: White-banded Triggerfish, <i>Rhinecanthus aculeatus</i>	Balistidae	B
3515b	20r	Top: McCosker's Flasher, <i>Paracheilinus mccoskeri</i>	Labridae	B
		Bot: Basketfish, <i>Kentrocapros rosapinto</i>	Aracanidae	B
3515c	20r	Top: Rare Wrasse, <i>Macropharyngodon bipartitus</i>	Labridae	B
		Bot: Five-lined Cardinalfish, <i>Cheilodipterus quinquelineatus</i>	Apogonidae	B
3515d	20r	Sling-jaw Wrasse, <i>Epibulus insidiator</i>	Labridae	A
3515	Margin	UL: Powderblue Surgeonfish, <i>Acanthurus leucosternon</i>	Acanthuridae	Z
		Top: Orange-spine Tang (?), <i>Naso lituratus</i> (behind title)	Balistidae	Z
		UL: Lined Surgeonfish, <i>Acanthurus lineatus</i>	Acanthuridae	Z
		UR: Brown Surgeonfish, <i>Acanthurus nigrofuscus</i>	Acanthuridae	Z
3525	SS 60r	Top: Five-lined Cardinalfish, <i>Cheilodipterus quinquelineatus</i>	Apogonidae	B
		Bot: no common name, <i>Coris cuvieri</i>	Labridae	B
	Margin	UL: Powderblue Surgeonfish, <i>Acanthurus leucosternon</i>	Acanthuridae	Z
		Top: Orange-spine Tang (?), <i>Naso lituratus</i> (behind title)	Balistidae	Z
		Ctr: Five-lined Cardinalfish, <i>Cheilodipterus quinquelineatus</i>	Apogonidae	Z
		UL: Areolate Grouper, <i>Epinephelus areolatus</i>	Serranidae	Z
		Bot: Regal Angelfish, <i>Pygoplites diacanthus</i>	Pomacentridae	Z
		LL: Golden Sweeper, <i>Parapriacanthus ransonneti</i>	Pempheridae	Z
2015 December 9 (Maldive Fishes) (MS/4 & SS/1)				
3516a	20r	Top: Harlequin Filefish, <i>Oxymonacanthus longirostris</i>	Monacanthidae	B
		Bot: Twospined Angelfish, <i>Centropyge bispinosa</i>	Pomacanthidae	B
3516b	20r	Top: McCosker's Flasher, <i>Paracheilinus mccoskeri</i>	Labridae	B
		Ctr: Elegant Firefish, <i>Nemateleotris decora</i>	Microdesmidae	B
		Bot: Thornback Cowfish, <i>Lactoria fornasini</i>	Ostraciidae	B
3516c	20r	Top: Bluntheaded Wrasse, <i>Thalassoma amblycephalum</i>	Labridae	B
		Bot: Warty Frogfish, <i>Antennarius maculatus</i>	Antennariidae	B
3516d	20r	Common Bluestripe Snapper, <i>Lutjanus kasmira</i>	Lutjanidae	A

MALDIVE ISLANDS (continued)

3516	Margin	UL: Powderblue Surgeonfish, <i>Acanthurus leucosternon</i>	Acanthuridae	Z
		Top: Orange-spine Tang (?), <i>Naso lituratus</i> (behind title)	Balistidae	Z
		UL: Queen Coris, <i>Coris formosa</i>	Labridae	Z
		UR: Common Bluestripe Snapper, <i>Lutjanus kasmira</i>	Lutjanidae	Z
		LL: Twospined Angelfish, <i>Centropyge bispinosa</i>	Pomacanthidae	Z
3526	SS 60r	Great Barracuda, <i>Sphyraena barracuda</i>	Sphyraenidae	A
	Margin	UL: Powderblue Surgeonfish, <i>Acanthurus leucosternon</i>	Acanthuridae	Z
		Top: Orange-spine Tang (?), <i>Naso lituratus</i> (behind title)	Balistidae	Z
		MR: Great Barracuda, <i>Sphyraena barracuda</i> (school of many)	Sphyraenidae	Z
		Ctr: Laced Moray, <i>Gymnothorax favagineus</i>	Muraenidae	Z
		LL: Thornback Cowfish, <i>Lactoria fornasini</i>	Ostraciidae	Z
		Bot: Opah, <i>Lampris guttatus</i>	Lampridae	Z
		LR: Barred Moray, <i>Echidna polyzona</i>	Muraenidae	Z
2015 December 9 (Terns) (MS/4)				
3518b	22r	U/I fish (in beak of Roseate Tern, <i>Sterna dougallii</i>) (also in UL margin)		U C Z
2015 December 9 (Maldive Fishes) (MS/4 & SS/1)				
3520a	22r	Top: Daisy Parrotfish, <i>Chlorurus sordidus</i>	Scaridae	B
		LR: Lined Wrasse, <i>Anampses lineatus</i>	Labridae	B
		LL: Ribbontail Stingray, <i>Taeniura lymma</i>	Dasyatidae	B
3520b	22r	Top: Twospot Turkeyfish, <i>Dendrochirus biocellatus</i>	Scorpaenidae	B
		Bot: no common name, <i>Cirrhilabrus rubrisquamis</i>	Labridae	B
3520c	22r	Top: Whitespotted Boxfish, <i>Ostracion meleagris</i>	Ostraciidae	B
		Bot: Longnose Hawkfish, <i>Oxycirrhites typus</i>	Cirrhitidae	B
3520d	22r	Top: Ribbontail Stingray, <i>Taeniura lymma</i>	Dasyatidae	B
		L: Lined Wrasse, <i>Anampses lineatus</i>	Labridae	B
		Bot: Guineafowl Puffer, <i>Arothron meleagris</i>	Tetraodontidae	B
3520	Margin	UL: Powderblue Surgeonfish, <i>Acanthurus leucosternon</i>	Acanthuridae	Z
		Top: Orange-spine Tang (?), <i>Naso lituratus</i> (behind title)	Balistidae	Z
		UL: no common name, <i>Cirrhilabrus rubrisquamis</i>	Labridae	Z
		UL: Whitespotted Boxfish, <i>Ostracion meleagris</i>	Ostraciidae	Z
		UR: Daisy Parrotfish, <i>Chlorurus sordidus</i>	Scaridae	Z
		Bot: Longnose Hawkfish, <i>Oxycirrhites typus</i>	Cirrhitidae	Z
3530	SS 70r	Top: Whitespotted Garden Eel, <i>Gorgasia maculata</i>	Congridae	B
		Ctr: Daisy Parrotfish, <i>Chlorurus sordidus</i>	Scaridae	B
		Bot: Ribbontail Stingray, <i>Taeniura lymma</i>	Dasyatidae	B
	Margin	UL: Powderblue Surgeonfish, <i>Acanthurus leucosternon</i>	Acanthuridae	Z
		ML & Ctr: Sammara Squirrelfish, <i>Neoniphon samara</i>	Holocentridae	Z
		LL: Ribbontail Stingray, <i>Taeniura lymma</i>	Dasyatidae	Z
		Ctr: Whitespotted Garden Eel, <i>Gorgasia maculate</i>	Congridae	Z
		LR: Live Sharksucker, <i>Echeneis naucrates</i>	Echeneidae	Z
2015 December 9 (Sharks) (MS/4 & SS/1)				
3521a	22r	Ctr: Whale Shark, <i>Rhincodon typus</i>	Rhincodontidae	A
		Bot: U/I small fish under shark		U C
3521b	22r	Blacktip Shark, <i>Carcharhinus limbatus</i> , (country name in white)	Carcharhinidae	A
3521c	22r	Oceanic Whitetip Shark, <i>Carcharhinus longimanus</i>	Carcharhinidae	A
3521d	22r	Blacktip Shark, <i>Carcharhinus limbatus</i> , (country name in blue)	Carcharhinidae	A
3521	Margin	UL: Powderblue Surgeonfish, <i>Acanthurus leucosternon</i>	Acanthuridae	Z
		Top: Orange-spine Tang (?), <i>Naso lituratus</i> (behind title)	Balistidae	Z

MALDIVE ISLANDS (continued)

3531	SS 70r	Shortfin Mako, <i>Isurus oxyrinchus</i>	Lamnidae	A
	Margin	UL: Powderblue Surgeonfish, <i>Acanthurus leucosternon</i>	Acanthuridae	Z
		Top: Orange-spine Tang (?), <i>Naso lituratus</i> (behind title)	Balistidae	Z
		ML: Whale Shark, <i>Rhincodon typus</i>	Rhincodontidae	Z
		LL: Blacktip Shark, <i>Carcharhinus limbatus</i>	Carcharhinidae	Z

2016 January 18 (WWF: Green Humphead Parrotfish) (MS/4 & SS/1)

3552a	22r	Green Humphead Parrotfish, <i>Bolbometopon muricatum</i> (face R)	Scaridae	A
		Bot: U/I yellow reef fish		U C
3552b	22r	Same species (facing L w/ red mouth)	Scaridae	A
3552c	22r	Same species (facing R)	Scaridae	A
3552d	22r	Same species (facing L)	Scaridae	A
3552	Margin	MS/4 in shape of Green Humphead Parrotfish	Scaridae	Z
3553	SS 70r	Green Humphead Parrotfish, <i>Bolbometopon muricatum</i>	Scaridae	A
		SS/1 in shape of Green Humphead Parrotfish	Scaridae	Z

MARSHALL ISLANDS**2018 April 23** (Sharks) (MS/6)

1177a	50c	Pelagic Thresher Shark, <i>Alopias pelagicus</i>	Alopiidae	A
1177b	\$1.25	Silky Shark, <i>Carcharhinus falciformis</i>	Carcharhinidae	A
1177c	\$1.50	Whale Shark, <i>Rhincodon typus</i>	Rhincodontidae	A
1177d	\$1.75	Great White Shark, <i>Carcharodon carcharias</i>	Lamnidae	A
1177e	\$2	Oceanic Whitetip Shark, <i>Carcharhinus longimanus</i>	Carcharhinidae	A
1177f	\$2.25	Blue Shark, <i>Prionace glauca</i>	Carcharhinidae	A

MOLDOVA**2018 June 1** (Children's Day) (Set/2)

988	5.75L	Stylized fish (fairy tale characters)		S C
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NEW ZEALAND**2018 June 6** (Legend of Maui & the Fish) (2ea MS/6)

2804d	\$2.40	Stylized fish (perf 13¼×13½)		S
2805d	\$2.40	Stylized fish (die cut 10×9½) (s/a)		S

NEVIS**2018 May 24** (Whales) (MS/3 & SS/1)

1951	Margin	L & R: Stylized fish (w/ three whale stamps)		S
1952	Margin	L & R: Stylized fish (w/ whale SS stamp)		S

2018 June 5 (Colorful Saltwater Fish) (MS/6)

1954a	\$4	Moorish Idol, <i>Zanclus cornutus</i>	Zanclidae	S A
1954b	\$4	Black Tang (Longnose Surgeonfish), <i>Zebrasoma rostratum</i>	Acanthuridae	S A
1954c	\$4	Flame Angelfish, <i>Centropyge loriculus</i>	Pomacanthidae	S A
1954d	\$4	Northern Red Snapper (Red Snapper), <i>Lutjanus campechanus</i>	Lutjanidae	S A
1954e	\$4	Pelagic (Spot-fin) Porcupinefish, <i>Diodon hystrix</i>	Diodontidae	S A
1954f	\$4	Yellow Longnose (Longnose) Butterflyfish, <i>Forcipiger flavissimus</i>	Chaetodontidae	S A

2018 June 29 (Sharks) (MS/4 & SS/1)

1958a	\$5.50	Shortfin Mako Shark, <i>Isurus oxyrinchus</i>	Lamnidae	A
1958b	\$6	Tiger Shark, <i>Galeocerdo cuvier</i>	Carcharhinidae	A
1958c	\$6.50	Great White (White) Shark, <i>Carcharodon carcharias</i>	Lamnidae	A
1958d	\$7	Bull Shark, <i>Carcharhinus leucas</i>	Carcharhinidae	A
1959	SS \$10	Smooth Hammerhead Shark, <i>Sphyrna zygaena</i>	Sphyrnidae	A

NORFOLK ISLAND**2018 April 30** (Wrasses) (Set/2 & SS/2)

1140	\$1	Surge wrasse, <i>Thalassoma purpuraceum</i>	Labridae	A
1141	\$2	Orange wrasse, <i>Pseudolabrus luculentus</i>	Labridae	A

NORFOLK ISLAND (continued)

1141a SS/2 (Sc#1140–41)

The margin of the MS contains images of other variations of the two species on the stamps plus male, female, and juvenile images of the following species:

Margin	Threespot Wrasse, <i>Halichoeres trimaculatus</i>	Labridae	Z
	Inscribed Wrasse, <i>Notolabrus inscriptus</i>	Labridae	Z
	Yellow-brown (Green Moon) Wrasse, <i>Thalassoma lutescens</i>	Labridae	Z

NORWAY**2018 April 20** (Yellow Perch) (Single)1845 18k European perch, *Perca fluviatilis* Percidae A**PERU****2018 February 12** (Fish of Peru) (MS/4)

1960a	3s	Giant Manta, <i>Mobula birostris</i>	Myliobatidae	A
1960b	3s	Smooth Hammerhead Shark, <i>Sphyrna zygaena</i>	Sphyrnidae	A
1960c	3s	Pacific Seahorse, <i>Hippocampus ingens</i> (extends into margin)	Syngnathidae	A
1960d	3s	Californian Needlefish, <i>Strongylura exilis</i>	Belonidae	A

SIERRA LEONE**2017 January 30** (Art of Pompidou Center) (MS/4)

4106a 6000le Stylized fish (Chagall ptg: "The Blue Circus") S C

2017 March 30 (Fish) (MS/4 & SS/1)

4177a	9800le	Golden Pheasant Panchax, <i>Callopanchax occidentalis</i>	Nothobranchiidae	A
4177b	9800le	Red Squirrelfish, <i>Sargocentron hastatum</i>	Holocentridae	A
4177c	9800le	Bluespotted Triggerfish, <i>Balistes punctatus</i>	Balistidae	A
4177d	9800le	Mediterranean Rainbow Wrasse, <i>Coris julis</i>	Labridae	A
4177	Margin	UL: U/I species		U Z
		UR: Hammerhead Shark, <i>Sphyrna</i> sp.	Sphyrnidae	U Z
4196	SS 40000le	Queen Triggerfish, <i>Balistes vetula</i>	Balistidae	A
	Margin	UR: U/I species		U Z
		UL: Hammerhead Shark, <i>Sphyrna</i> sp.	Sphyrnidae	U Z
		LL: Shortfin Mako Shark, <i>Isurus oxyrinchus</i>	Lamnidae	Z
		LR: Blackbelly Rosefish, <i>Helicolenus dactylopterus</i>	Sebastidae	Z

2017 May 30 (Jacques Ives Cousteau) (MS/4 & SS/1)

4326	6600le	UL: Great White Shark, <i>Carcharodon carcharias</i> (w/ Cousteau)	Lamnidae	B
		LL: Siamese Fighting Fish, <i>Betta splendens</i>	Osphronemidae	B
4328	6600le	Clown Anemonefish, <i>Amphiprion ocellaris</i> (w/ Cousteau)	Pomacentridae	B
4330	SS 40000le	LR: Copperband Butterflyfish, <i>Chelmon rostratus</i>	Chaetodontidae	Z

2017 September 29 (Water Birds) (MS/4 & SS/1)

4465a	9800le	U/I fish (in beak of <i>Anhinga rufa</i>)		U C
4465d	9800le	U/I fish (in beak of <i>Sula leucogaster</i>)		U C
4485	SS 40000le	U/I fish (in beak of <i>Pelecanus rufescens</i>)		U C
	Margin	LR: U/I fish (in beak of <i>Gelochelidon nilotica</i>)		U C

2017 September 29 (Fish) (MS/4 & SS/1)

4468a	9800le	Goldfish, <i>Carassius auratus</i>	Cyprinidae	A
4468b	9800le	Blue Marlin, <i>Makaira nigricans</i>	Istiophoridae	A
4468c	9800le	Clown Anemonefish, <i>Amphiprion ocellaris</i>	Pomacentridae	A
4468d	9800le	Oscar, <i>Astronotus ocellatus</i>	Cichlidae	A
4468	Margin	Bot: Largemouth Bass, <i>Micropterus salmoides</i>	Centrarchidae	Z
4488	SS 40000le	Narrow-lined Puffer, <i>Arothron manilensis</i>	Tetraodontidae	A
	Margin	Bot: Yellowfin tuna, <i>Thunnus albacares</i>	Scombridae	Z
		MR: Blue Marlin, <i>Makaira nigricans</i>	Istiophoridae	Z

SIERRA LEONE (continued)		2017 September 29 (Sharks) (MS/4 & SS/1)		
4469a	9800le	Shortfin Mako Shark, <i>Isurus oxyrinchus</i>	Lamnidae	A
4469b	9800le	Great Hammerhead Shark, <i>Sphyrna mokarran</i>	Sphyrnidae	A
4469c	9800le	Sicklefin Lemon Shark, <i>Negaprion acutidens</i>	Carcharhinidae	A
4469d	9800le	Tiger Shark, <i>Galeocerdo cuvier</i>	Carcharhinidae	A
4469	Margin	Bot: Great Hammerhead Shark, <i>Sphyrna mokarran</i>	Sphyrnidae	Z
4489	SS 40000le	Great white Shark, <i>Carcharodon carcharias</i> (also lower margin)	Lamnidae	A Z
		2017 September 29 (Piranhas) (MS/4 & SS/1)		
4470a	9800le	Redeye Piranha, <i>Serrasalmus rhombeus</i>	Serrasalminae	A
4470b	9800le	Piranha (no common name), <i>Pristobrycon careospinus</i>	Serrasalminae	A
4470c	9800le	Red Piranha, <i>Pygocentrus nattereri</i>	Serrasalminae	A
4470d	9800le	Piranha (no common name), <i>Serrasalmus manuela</i>	Serrasalminae	A
4470	Margin	LL: Speckled Piranha, <i>Serrasalmus spilopleura</i>	Serrasalminae	Z
		LR: Black Spot Piranha, <i>Pygocentrus cariba</i>	Serrasalminae	Z
4490	SS 40000le	Wimple Piranha, <i>Catoprion mento</i>	Serrasalminae	A
	Margin	LL: Redeye Piranha, <i>Serrasalmus rhombeus</i>	Serrasalminae	Z
		2017 October 30 (120th anniv. Boston Marathon) (MS/4)		
4506c	9800le	Stylized fish (on old flag of Canada)		S C
		2017 December 29 (Kingfishers) (MS/4)		
4595a	9800le	U/I fish (in beak of <i>Halcyon badia</i>)		U C
		2017 December 29 (Manatees) (MS/4 & SS/1)		
4588	Margin	MS Bkgrd: U/I fish in small school		U C Z
4608	SS 40000le	Bkgrd: U/I fish in small school		U C Z
ST. PIERRE & MIQUELON		2018 May 19 (Cod Fishermen) (Single)		
1061	46c	Atlantic cod, <i>Gadus morhua</i> (fishermen with cod skin)	Gadidae	C
ST. VINCENT		2017 June 2 (Sharks) (2ea MS/3)		
4103a	\$5	Tiger Shark, <i>Galeocerdo cuvier</i>	Carcharhinidae	A
4103b	\$5	Whale Shark, <i>Rhincodon typus</i>	Rhincodontidae	A
4103c	\$5	Pacific Sleeper Shark, <i>Somniosus pacificus</i>	Somniosidae	A
4103	Margin	UR: Great White Shark, <i>Carcharodon carcharias</i>	Lamnidae	Z
4104a	\$5	Basking Shark, <i>Cetorhinus maximus</i>	Cetorhinidae	A
4104b	\$5	Great Hammerhead Shark, <i>Sphyrna mokarran</i>	Sphyrnidae	A
4104c	\$5	Great White (White) Shark, <i>Carcharodon carcharias</i>	Lamnidae	A
4104	Margin	UL: Whale Shark, <i>Rhincodon typus</i>	Rhincodontidae	Z
		2017 September 28 (Marine Life) (MS/3)		
4116	Margin	Top: U/I fish in small school		U C Z
		2018 March 7 (Marine Life of Caribbean) (MS/4 & SS/2)		
4143a	\$6	Flying Gurnard, <i>Dactylopterus volitans</i>	Dactylopteridae	A
4143c	\$8	Great Barracuda, <i>Sphyrna barracuda</i>	Sphyrnidae	A
4143d	\$8	Southern Stingray, <i>Dasyatis americanus</i>	Dasyatidae	A
4143	Margin	MR: French Angelfish (juvenile), <i>Pomacanthus paru</i> (partial)	Pomacentridae	Z
		LR: Stoplight parrotfish, <i>Sparisoma viride</i> (partial)	Scaridae	Z
		ML: Spanish hogfish (juvenile?), <i>Bodianus rufus</i> (partial)	Labridae	Z
4144a	SS \$7	Yellowhead Jawfish, <i>Opistognathus aurifrons</i>	Opistognathidae	A
4144b	SS \$8	Longsnout Seahorse, <i>Hippocampus reidi</i>	Syngnathidae	A
4144	Margin	LL: Sergeant-major, <i>Abudefduf saxatilis</i>	Pomacentridae	Z
THAILAND		2018 April 2 (Thai Heritage Conservation) (Set/4)		
2997	3b	Stylized fish (mural painting)		S C

NON-MACHINEABLE RATE STAMPS

In 2010, the U.S. Postal Service began issuing a series of special stamps to accommodate paying the total fee for a first-class letter weighing up to two ounces. This fee includes the regular first-class rate and the additional fee for the second ounce. It also happens that the USPS charges this same fee for non-machinable mail items.

The non-machinable surcharge is applied to envelopes that cannot be serviced by the automatic sorting machines. Items that meet the criterion for this treatment include: odd-shaped, length divided by height is less than 1.3 or more than 2.5, container is too stiff to bend, container is lumpy, or has ribbons, buttons, or clasps.

The square stamp format was developed in partnership with the greeting card industry for use on oversized or square envelopes. These stamps are also valid on any piece of mail at their denominated value, or in the case of non-denominated stamps, their current rated value.

Artist Tom Engerman created the art for each stamp on a computer using images of preserved butterflies as a starting point. The resulting art is a stylized, simplified image of the species rather than an exact replica. Derry Noyes of the USPS designed each stamp. The USPS has used different printers for the stamps.

Each stamp was issued in a pane of 20 and uses self-adhesive gum. They are all non-soakable and therefore used copies are best left on piece.

The first stamp in this series was issued on 17 May 2010, and shows the Monarch butterfly (*Danaus plexippus*). The 64c denomination pays the first-class rate (44c) plus (20c) non-machinable surcharge. It was printed by Avery Dennison.



Danaus plexippus
2010, Sc#4462



Euphydryas phaeton
2012, Sc#4603

Our second stamp was issued on 20 January 2012, and depicts the Baltimore Checkerspot (*Euphydryas phaeton*). The 65c paid the first-class rate (44c) plus (21c) non-machinable surcharge. It was printed by Avery Dennison.

The third stamp was issued on 23 January 2013, and shows the Spicebush Swallowtail (*Papilio troilus*). The 66c paid the first-class rate (45c) plus (21c) non-machinable surcharge. It was printed by Avery Dennison.



Papilio troilus
2013, Sc#4736



Speyeria cybele
2014, Sc#4859

Fourth in our series was issued on 10 February 2014, and depicts the Great Spangled Fritillary (*Speyeria cybele*). The 70c paid the first-class rate (49c) plus (21c) non-machinable surcharge. It was printed by CCL Label, Inc., which acquired Avery Dennison and took over their printing contracts.

The fifth stamp was issued on 1 June 2015, and shows the Eastern Tiger Swallowtail (*Papilio glaucus*). At this point, the USPS began using the "Non-machinable [sic] Surcharge" indicia instead of a denomination. This stamp sold for 71c and paid the first-class rate (49c) plus (22c) non-machinable surcharge. It was printed by Ashton-Potter.



Papilio glaucus
2015, Sc#4999



Cupido comyntas
2016, Sc#5136

The sixth and current stamp was issued on 24 September 2016. It shows the Eastern Tailed-Blue (*Cupido comyntas*). This stamp initially sold for 68c and paid the first-class rate (47c) plus (21c) non-machinable surcharge. It was printed by Ashton-Potter. The current (2018) rate for this stamp is 71c.



Zerene eurydice
2019?

The design for a seventh stamp shows a California Dogface (*Zerene eurydice*).



ENTOMOLOGY

Editor

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



New Listings

Scott#	Denom	Common Name/Scientific Name	Family/Subfamily	Code
ALGERIA 2018 October 16 (Varieties of Honey) (Set/2) (trapezoidal)				
a	25d	Western Honeybee, <i>Apis mellifera</i> L. (w/ honeycomb at UR)	API, Apinae	B
b	25d	Western Honeybee, <i>Apis mellifera</i> L. (w/ honeycomb at LL)	API, Apinae	B
ANTIGUA & BARBUDA 2018 August 28 (Royal Baby) (SS/4)				
N/A	Margin	L: Stylized Dragonflies	Odonata	S Z
2018 October 1 (Set/6)				
N/A	\$2	Brown-winged Striped Sweat Bee, <i>Agapostemon splendens</i> Lepeletier	HAL, Halictinae	A
N/A	\$3	Buff-tailed Bumblebee, <i>Bombus terrestris</i> L.	API, Apinae	A
N/A	\$4	<i>Megachile lagopoda</i> L.	MEGA, Megachilinae	A
N/A	\$5	Eastern Carpenter Bee, <i>Xylocopa virginica</i> L.	API, Xylocopinae	A
N/A	\$6	Buff-tailed Bumblebee, <i>Bombus terrestris</i> L.	API, Apinae	A
N/A	\$10	Western Honeybee, <i>Apis mellifera</i> L.	API, Apinae	A
AUSTRALIA 2017 October 17 (Items Starting w/ Same Letter) (Set/5, Strip/5, Bklt/10)				
4697	\$1	Bluebottle Fly, <i>Calliphora vomitoria</i> L. (letter B) (perf 14¾×14)	CALL, Calliphorinae	C
4701	\$1	Blue Emperor, <i>Papilio ulysses</i> L. (letter U) (perf 14¾×14)	PAP, Papilioninae	C
4702	\$1	Bluebottle Fly, <i>Calliphora vomitoria</i> L. (letter B) (die cut 11¼)	CALL, Calliphorinae	C
4702a		Bklt/10 (Sc#4702)		
4706	\$1	Blue Emperor, <i>Papilio ulysses</i> L. (letter U) (die cut 11¼)	PAP, Papilioninae	C
4706a		Bklt/10 (Sc#4706)		
4706b		Strip/5 (Sc#4702-06)		
BELGIUM 2018 August 27 (Dragonflies) (MS/5)				
a	(€1.48)	Blue Darner, <i>Aeshna cyane</i> Muller	AES, Aeshninae	A
b	(€1.48)	Banded Agrion, <i>Calopteryx splendens</i> Harris	CAL, Calopteryginae	A
c	(€1.48)	Emperor Dragonfly, <i>Anax imperator</i> Leach	AES, Aeshninae	A
d	(€1.48)	Broad-bodied Chaser, <i>Libellula depressa</i> L.	LIB, Libellulinae	A
e	(€1.48)	Common Darter, <i>Sympetrum striolatum</i> Charpentier	LIB, Sympetrinae	A
	Margin	Top: U/I dragonfly (drawing)		U Z
BOSNIA & HERZEGOVINA 2018 October 27 (Dragonfly) (Single)				
N/A	1m	Banded Demoiselle, <i>Calopteryx splendens</i> Harris	CAL, Calopteryginae	A
COLOMBIA 2018 August 27 (Birds & Butterflies) (MS/15)				
f	1000p	Isabella Tiger, <i>Eueides isabella</i> ssp. <i>arquata</i> Stichel	NYM, Heliconiinae	A
g	1000p	Darkened Longwing, <i>Eueides procula</i> ssp. <i>edias</i> Hewitson	NYM, Heliconiinae	A
h	1000p	White-barred Longwing, <i>Heliconius cydno</i> ssp. <i>cydnides</i> Stgr.	NYM, Heliconiinae	A
i	1000p	Crimson-patched Longwing, <i>Heliconius erato</i> ssp. <i>chestertonii</i> Hew.	NYM, Heliconiinae	A
j	1000p	Doris, <i>Laparus doris</i> ssp. <i>obscurus</i> Weymer	NYM, Heliconiinae	A
	Margin	Top: Butterfly silhouette		S Z

DJIBOUTI		2017 December 11 (Bee-eaters) (MS/4 & SS/1) (DJB17611a&b)		
1316a	240fr	U/I Bee (in beak of <i>Merops apiaster</i>)	Apidae	U C
1316b	240fr	U/I Bee (in beak of <i>M. variegatus</i>)	Apidae	U C
1316c	240fr	U/I insect (in beak of <i>M. malimbicus</i>)		U C
1335	SS 950fr	U/I Dragonfly (in bird's beak) (also in margin)	Odonata	U C Z
		2017 December 11 (Butterflies) (MS/4 & SS/1) (DJB17601a&b)		
1318a	240fr	Purple Emperor, <i>Apatura iris</i> L.	NYM, Apaturinae	A
1318b	240fr	Eastern Tiger Swallowtail, <i>Papilio glaucus</i> L.	PAP, Papilioninae	A
1318c	240fr	Pipevine Swallowtail, <i>Battus philenor</i> L.	PAP, Papilioninae	A
1318d	240fr	Green Hairstreak, <i>Callophrys rubi</i> L.	LYC, Theclinae	A
1337	SS 950fr	Spicebush Swallowtail, <i>Papilio troilus</i> L.	PAP, Papilioninae	A
	Margin	UR: Monarchs, <i>Danaus plexippus</i> L. (six)	NYM, Danainae	Z
		LL & MR: Spicebush Swallowtail, <i>Papilio troilus</i> L.	PAP, Papilioninae	Z
		2017 December 11 (Orchids) (SS/1) (DJB17615b)		
1342	Margin	LL: Crimson-Speckled Moth, <i>Utetheisa pulchella</i> L.	ARC, Arctiinae	Z
		UR: Viceroy, <i>Limenitis archippus</i> Cramer	NYM, Limenitidinae	Z
ESTONIA		2018 August 23 (Mushroom) (Single)		
N/A	65c	Stylized Ant (w/ mushroom)	Formicidae	S C
FINLAND		2018 September 12 (Flora & Fauna) (Strip/5)		
a	(€1.50)	Seven-Spotted Ladybird, <i>Coccinella septempunctata</i> L.	COC, Coccinellinae	A
FRANCE		2018 May 4 (Flower Arrangements) (Bklt/10) (Red Cross)		
B785	(80c+20c)	U/I Butterflies (w/ Zinnia flowers)		U B
B785a		Bklt/10 (Sc#B776–85)		
GREECE		2018 May 20 (World Bee Day) (Set/4 & 4ea SS/1)		
Each stamp was also issued in a SS/1				
	50c	Western Honeybee, <i>Apis mellifera</i> L.	API, Apinae	A
	72c	Same species	API, Apinae	A
	80c	Same species	API, Apinae	A
	€2	Same species	API, Apinae	A
GUYANA		2018 March 14 (Butterflies) (2ea MS/4 & SS/2)		
a	\$200	Julia, <i>Dryas iulia</i> Fabr.	NYM, Heliconiinae	A
b	\$300	Cloudless Sulfur, <i>Phoebis sennae</i> L.	PIE, Coliadinae	A
c	\$400	Isabella Tiger, <i>Eueides isabella</i> Cramer	NYM, Heliconiinae	A
d	\$500	Zebra Mosaic, <i>Colobura dirce</i> L.	NYM, Nymphalinae	A
	Margin	UL: Common Clubtail, <i>Atrophanoura coon</i> Fabr. (silhouette)	PAP, Papilioninae	S Z
		UR: Stylized Butterfly silhouette	Nymphalidae	S Z
a	\$250	Red Postman, <i>Heliconius erato</i> L.	NYM, Heliconiinae	A
b	\$350	Lemon Butterfly, <i>Papilio demoleus</i> L.	PAP, Papilioninae	A
c	\$450	Doris Longwing, <i>Laparus doris</i> L.	NYM, Heliconiinae	A
d	\$550	Malachite, <i>Siproeta stelenes</i> L.	NYM, Nymphalinae	A
	Margin	UL & UR: Stylized Butterfly silhouettes	Nymphalidae	S Z
a	SS \$400	Common Morpho, <i>Morpho helenor</i> ssp. <i>peleides</i> Kollar (v)	NYM, Morphinae	A
b	SS \$400	Same species (r)	NYM, Morphinae	A
	Margin	LR: Monarch, <i>Danaus plexippus</i> L. (silhouette)	NYM, Danainae	S Z
		UL: Stylized Butterfly silhouette	Nymphalidae	S Z
		2018 November 20 (Ants) (MS/4 & SS/2)		
	\$200, 3×\$400	Harvester Ant, <i>Atta cephalotes</i> L.	FOR, Myrmicinae	A
	SS 2×\$530	Harvester Ant, <i>Atta cephalotes</i> L.	FOR, Myrmicinae	A

ISRAEL		2018 April 9 (Spring Flowers) (MS/4)		
a	4.10s	Small Copper, <i>Lycaena phlaeas</i> L.	LYC, Lycaeninae	B
b	4.10s	U/I Butterfly	LYC, Polyommatae	U B
c	4.10s	Black-Veined White, <i>Aporia crataegi</i> L.	PIE, Pierinae	B
d	4.10s	U/I Beetle	?Chrysomelidae	U B
JAPAN		2017 September 20 (Traditional Color Series #1) (MS/10)		
4148h	62¥	Stylized Dragonflies	Odonata	S U
KAZAKHSTAN		2018 October 19 (Nature Reserves) (MS/3)		
b	500te	Apollo, <i>Parnassius apollo</i> L.	PAP, Parnassiinae	A
	Margin	Bot: Red Admiral, <i>Vanessa atalanta</i> L.	NYM, Nymphalinae	Z
KOREA (North)		2018 (Prague 2018 Expo) (SS/2)		
a	70w	Old World Swallowtail, <i>Papilio machaon</i> L. (round)	PAP, Papilioninae	A
b	70w	U/I Honeybee (w/ orchid)	API, Apinae	U A
KYRGYZSTAN		2018 September 7 (Butterflies) (Set/3 & SS/3)		
a	50s	<i>Parnassius loxias</i> ssp. <i>tashkorensis</i> Kreuzberg	PAP, Parnassiinae	A
b	100s	<i>Colias regia</i> Grum-Grshimailo	PIE, Coliadinae	A
c	150s	<i>Colias christophi</i> Grum-Grshimailo	PIE, Coliadinae	A
	Margin	LL: Large Keeled Apollo, <i>Parnassius tianschanicus</i> Oberthür	PAP, Parnassiinae	Z
LIBERIA		2018 September 8 (Moths) (2ea SS/2) (oval)		
a	\$390	Tailed Comet Moth, <i>Actias mittrei</i> Guerin-Méneville (larva)	SAT, Saturniinae	A
b	\$390	Same species (two larvae)	SAT, Saturniinae	A
	Margin	R: Same species (adult)	SAT, Saturniinae	Z
a	\$390	Tailed Comet Moth, <i>Actias mittrei</i> Guerin-Méneville (w/ tails)	SAT, Saturniinae	A
b	\$390	Same species (body less tails)	SAT, Saturniinae	A
	Margin	Top: Same species (two larvae)	SAT, Saturniinae	Z
		2018 October 25 (Butterflies of Africa) (MS/3) (round)		
a	\$100	Giant Blue Swallowtail, <i>Papilio zalmoxis</i> Hewitson	PAP, Papilioninae	A
b	\$200	Blue Salamis, <i>Salamis temora</i> C&R Felder	NYM, Nymphalinae	A
c	\$300	Blue Diadem, <i>Hypolimnias salmacis</i> Drury	NYM, Nymphalinae	A
MALAWI		2018 (Red Surcharges)		
854	900k	E. Black & Yellow Sw'tail, <i>Papilio pelodurus</i> Butler (Sc#737 surch)	PAP, Papilioninae	A
855	1200k	Forest Queen, <i>Euxanthe wakefieldi</i> Ward (Sc#706 surch)	NYM, Charaxinae	A
MOLDOVA		2018 April 13 (Months of the Year) (MS/3+1 label)		
980	Margin	Label & LR: Tiny stylized Butterflies	Lepidoptera	S Z
NEW CALEDONIA		2018 November 7 (Fauna) (Strip/3)		
b	75fr	<i>Callismilax bouabouiensis</i>	TEN, Tenebrioninae	A
		2018 November 8 (Pollinators) (MS/4)		
c	110fr	Western Honeybee, <i>Apis mellifera</i> ssp. <i>mellifera</i> L.	API, Apinae	A
d	110fr	New Caledonian Grass Yellow, <i>Eurema hecabe</i> ssp. <i>novacaledoniae</i>		
		Corbet & Pendlebury	PIE, Coliadinae	A
	Margin	LL: Same species	PIE, Coliadinae	Z
		Ctr & Bot: Western Honeybee, <i>Apis mellifera</i> ssp. <i>mellifera</i> L.	API, Apinae	Z
POLAND		2018 September 30 (Beetles) (Set/2)		
N/A	3.20z	Polish Rhinoceros Beetle, <i>Oryctes nasicornis</i> ssp. <i>polonicus</i> Minck	SCA, Dynastinae	A
N/A	3.20z	Vermilion Flat Bark Beetle, <i>Cucujus cinnaberinus</i> Scopoli	CUJ, Cucujinae	(new) A

ROMANIA**2018 August 17** (National Parks of Romania) (Set/4)N/A 191 European Stag Beetle, *Lucanus cervus* L. LUC, Lucaninae A**ST. MARTIN****2018 October 28** (Butterflies) (MS/24)

a 100c Peacock, *Nymphalis io* L. NYM, Nymphalinae A
 b 100c Mourning Cloak, *Nymphalis antiopa* L. NYM, Nymphalinae A
 c 100c Holly Blue, *Celastrina argiolus* L. LYC, Polyommatinae A
 d 100c Ringlet, *Aphantopus hyperantus* L. NYM, Satyrinae A
 e 100c American Copper, *Lycaena phlaeas* L. LYC, Lycaeninae A
 f 100c Duke of Burgundy, *Hamearis lucina* L. RIO, Riodininae A
 g 100c Grayling, *Hipparchia semele* L. NYM, Satyrinae A
 h 100c Dingy Skipper, *Erynnis tages* L. HES, Pyrginae A
 i 100c Common Blue, *Polyommatus icarus* Rottemburg LYC, Polyommatinae A
 j 100c Bath White, *Pontia daplidice* L. PIE, Pierinae A
 k 100c European Brown Hairstreak, *Thecla betulae* L. LYC, Theclinae A
 l 100c Orange Tip, *Anthocharis cardamines* L. PIE, Pierinae A
 m 100c Large White, *Pieris brassicae* L. PIE, Pierinae A
 n 100c Red Admiral, *Vanessa atalanta* L. NYM, Nymphalinae A
 o 100c Cabbage White, *Pieris rapae* L. PIE, Pierinae A
 p 100c Arctic Skipper, *Carterocephalus palaemon* Pallas HES, Heteropterae A
 q 100c Pearl Fritillary, *Clossiana euphrosyne* L. NYM, Heliconiinae A
 r 100c Small Tortoiseshell, *Nymphalis urticae* L. NYM, Nymphalinae A
 s 100c Large Blue, *Maculinea arion* L. LYC, Polyommatinae A
 t 100c Eurasian Comma, *Nymphalis c-album* L. NYM, Nymphalinae A
 u 100c Meadow Brown, *Maniola jurtina* L. NYM, Satyrinae A
 v 100c Painted Lady, *Vanessa cardui* L. NYM, Nymphalinae A
 w 100c Purple Emperor, *Apatura iris* L. NYM, Apaturinae A
 x 100c Old World Swallowtail, *Papilio machaon* L. PAP, Papilioninae A

ST. VINCENT**2018 March 7** (Muhammad Ali) (MS/4)

4135 Margin Quote: "Float like a butterfly, sting like a bee" (no insect) R

2018 October 26 (Honeybees) (MS/4)

a \$4 Western Honeybee, *Apis mellifera* L. API, Apinae A
 b \$5 Same species API, Apinae A
 c \$6 Same species API, Apinae A
 d \$7 Same species API, Apinae A

SLOVENIA**2018 May 25** (World Bee Day) (SS/1)

1281 €1 Carnolian Honeybee, *Apis mellifera* ssp. *carnica* Pollman API, Apinae A
 Margin UL: Stylized honeybee S Z

SRI LANKA**2018 May 24** (Wild Animals of Sri Lanka) (MS/3)a 3r Sri Lankan Birdwing, *Troides darsius* Gray PAP, Papilioninae A**SWITZERLAND****2018 September 6** (Greeting Stamps) (Block/4)

1697 100c Stylized Ladybird Beetle Coccinellidae S

TONGA**2018 September 6** (Registered Mail) (Set/2)

N/A \$8 Blue Moon, *Hypolimnas bolina* ssp. *nerina* Fabr. NYM, Nymphalinae A
 N/A \$20.60 Common Eggfly, *Hypolimnas bolina* L. ♂ NYM, Nymphalinae A

2018 September 10 (Animals of the World) (Single)N/A \$10 Eastern Tiger Swallowtail, *Papilio glaucus* L. PAP, Papilioninae A**UZBEKISTAN****2018 August 6** (Flora & Fauna) (MS/8)h 3700s Lunar Yellow Underwing, *Noctua orbona* Hufnagel NOC, Noctuidae A

Beyond the Catalog

(Issues of dubious validity)

GUINEA**2018 August 8** (Mushrooms) (MS/4) (GU18323a)

d 12500fr U/I Ladybird Beetle (on mushroom) Coccinellidae U C

2018 August 8 (Extinct Species) (SS/1) (GU18324b)N/A SS 50000fr Xerces Blue, *Glaucopsyche xerces* Boisduval LYC, Polyommatinae A**2018 August 8** (Butterflies) (MS/4 & SS/1) (GU18325a&b)a 12500fr Queen Alexandra's Birdwing, *Troides alexandrae* Rothschild ♂ PAP, Papilioninae Ab 12500fr Mocker Swallowtail, *Papilio dardanus* Brown PAP, Papilioninae Ac 12500fr Monarch, *Danaus plexippus* L. NYM, Danainae Ad 12500fr Ceres Forester, *Euphaedra ceres* Fabr. NYM, Limenitidinae AN/A SS 50000fr Painted Lady, *Vanessa cardui* L. NYM, Nymphalinae AMargin LL: Queen Alexandra's B'wing, *Troides alexandrae* Roths. (chrysalis) PAP, Papilioninae Z

UR: Same species (adult) ♂ Z

LR: Same species (adult) ♀ Z

2018 August 8 (Horses) (SS/1) (GU18328b)N/A SS 50000fr Yellow Gorgon, *Meandrusa payeni* Boisduval PAP, Papilioninae BMargin Top: Amanda's Blue, *Polyommatus amandus* Schneider LYC, Polyommatinae ZLL: Red-Spotted Purple, *Limenitis arthemis* ssp. *astyanax* Fabr. NYM, Limenitidinae Z**GUINEA-BISSAU****2018 July 17** (Butterflies) (MS/5+label & SS/1+label) (GB18605a&b)a 640fr Unmarked Ceres Forester, *Euphaedra inanim* Butler NYM, Limenitidinae Ab 640fr Orange-Streak Acraea, *Acraea bonasia* Fabr. NYM, Heliconiinae Ac 640fr Leopard Fritillary, *Phalanta phalantha* Drury (mating pair) NYM, Heliconiinae Ad 640fr Clouded Flat, *Tagiades flesus* Fabr. HES, Pyrginae Ae 640fr Brown Pansy, *Junonia stygia* Aurivillius NYM, Nymphalinae ALabel Widespread Forester, *Euphaedra medon* L. NYM, Limenitidinae ZSS 3300fr Widespread Forester, *Euphaedra medon* L. NYM, Limenitidinae ALabel Unmarked Ceres Forester, *Euphaedra inanim* Butler NYM, Limenitidinae ZMargin Top: Leopard Fritillary, *Phalanta phalantha* Drury ♂ & ♀ NYM, Heliconiinae ZBot: Brown Pansy, *Junonia stygia* Aurivillius NYM, Nymphalinae ZLR: Clouded Flat, *Tagiades flesus* Fabr. HES, Pyrginae Z**MALDIVE ISLANDS****2018 August 15** (Orchids) (SS/1) (MLD18904b)Margin LL: Old World Swallowtail, *Papilio machaon* L. PAP, Papilioninae ZLR: Malachite, *Siproeta stelenes* L. NYM, Nymphalinae Z**MOZAMBIQUE****2018 August 15** (Mushrooms) (MS/4 & SS/1) (MOZ18402a&b)

a 116m U/I Grasshopper (w/ mushroom) Acrididae U B

b 116m U/I Butterfly (w/ mushroom) Lepidoptera U B

N/A SS 300m Scarce Copper, *Lycena virgaureae* L. (w/ mushroom) LYC, Lycaeninae B**NIGER****2018 June 26** (Mushrooms) (MS/4 & SS/1) (NIG18318a&b)

a 800fr U/I Grasshopper (w/ mushroom) Orthoptera B

N/A SS 3300fr Seven-spotted Ladybird, *Coccinella septempunctata* L. COC, Coccinellinae BMargin UR: Anna's Eighty-Eight, *Diaethria anna* Guerin-Méneville NYM, Biblidinae Z**2018 August 24** (Butterflies) (MS/4 & SS/1) (NIG18418a&b)a 800fr Common Morpho, *Morpho helenor peleides* Kollar NYM, Morphinae Ab 800fr Scarce Swallowtail, *Iphiiclides podalirius* L. PAP, Papilioninae A(Cap: *Papilio machaon*)c 800fr Wood White, *Leptidea sinapis* L. PIE, Dismorphiinae Ad 800fr Red Anartia, *Anartia amathea* L. NYM, Nymphalinae A

NIGER (continued)

N/A	SS 3300fr	Gulf Fritillary, <i>Agraulis vanillae</i> L.	NYM, Heliconiinae	A
	Margin	LL: Same species	NYM, Heliconiinae	Z
		UR: Red Anartia, <i>Anartia amathea</i> L.	NYM, Nymphalinae	Z
		LR: Clipper, <i>Parthenos sylvia</i> Cramer	NYM, Limenitidinae	Z

SIERRA LEONE

2018 September 28 (Butterflies) (MS/6 & SS/1) (SRL18810a&b)

a	9800le	Spring Azure, <i>Celastrina ladon</i> Cramer	LYC, Polyommatainae	A
b	9800le	Queen Alexandra’s Birdwing, <i>Troides alexandrae</i> Rothschild	PAP, Papilioninae	A
c	9800le	Eastern Tiger Swallowtail <i>Papilio glaucus</i> L. ♀	PAP, Papilioninae	A
d	9800le	Anna’s Eighty-Eight, <i>Diaethria anna</i> Guerin-Méneville	NYM, Biblidinae	A
e	9800le	Banded Blue Morpho, <i>Morpho achilles</i> L.	NYM, Morphinae	A
f	9800le	Mourning Cloak, <i>Nymphalis antiopa</i> L.	NYM, Nymphalinae	A
N/A	SS 40000le	Blue Emperor, <i>Papilio ulysseus</i> L.	PAP, Papilioninae	A
	Margin	Bot: Eastern Tiger Swallowtail, <i>Papilio glaucus</i> L. ♀	PAP, Papilioninae	Z

YEAR OF THE NOCTUIDAE

On 15 September 2018, Austria Post issued a pair of stamps depicting two species of moths from the Noctuidae family and celebrating 2018 as the “Year of the Noctuidae.” The first day ceremony was held at the Hirschstetten Botanical Gardens in Vienna, Austria. Issued at the same time were two C6 envelopes with cachets and two A6 size postcards that show each moth in a natural setting.



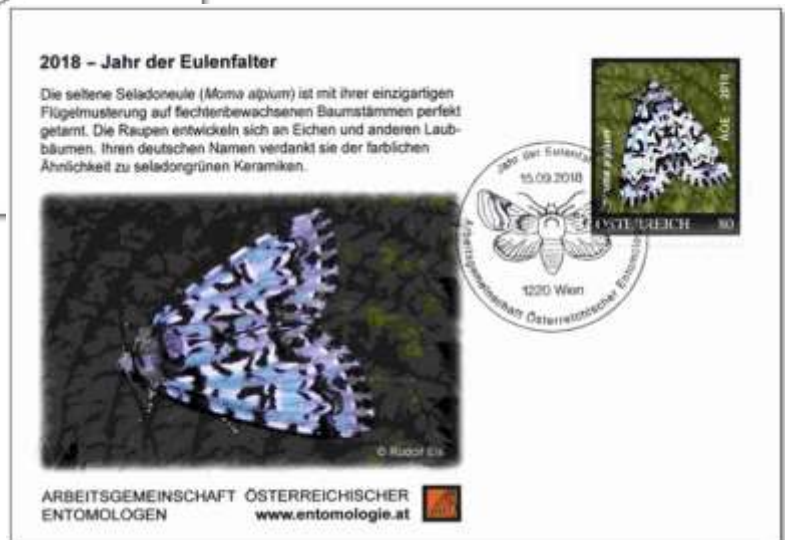
Periphanes delphinii
Philateliemarke stamp on envelope

The personalized stamp shows an image of the Scarce Merveille du Jour moth (*Moma alpium*) at rest on a green leaf. It can be found from May to September throughout the Palearctic region.

The image is based on a photograph by Rudolf Eis and designed by Herbert Zettel, AÖE.

The “Philateliemarke” stamp shows an image of the Pease Blossom Moth (*Periphanes delphinii*) resting on a flower. This colorful moth can be found from the Mediterranean area to the steppes of central Asia.

The stamp image is based on a photograph by Friedmar Graf and designed by Herbert Zettel of the Association of Austrian Entomologists (AÖE).



Moma alpium
Personalized stamp on envelope

ANSWERS TO COVER QUIZ

It’s a trick question. All of the species shown are moths. So all of them get to go to the mothball.



PALEONTOLOGY

Editor

Michael Kogan, BU1863

New Listings



Scott#	Denom	Common Name/Scientific Name	Family	Code
BELGIUM 2018 August 27 (Face to Face with Prehistoric Animals) (MS/10)				
a	(72c)	†Woolly Rhinoceros, <i>Coelodonta</i> sp.	Rhinocerotidae	A
b	(72c)	†Giant Elk, <i>Megaloceros</i> sp.	Cervidae	A
c	(72c)	†Mammoth, <i>Mammuthus</i> sp.	Elephantidae	A
d	(72c)	<i>Gastornis</i> sp.	†Gastornithidae	A
e	(72c)	<i>Mosasaurus</i> sp.	†Mosasauridae	A
N/A		MS/10 (2ea #a–e)		
	Margin	R: †Mammoth, <i>Mammuthus</i> sp.	Elephantidae	Z
CENTRAL AFRICAN REPUBLIC 2018 July 17 (Dinosaurs) (MS/4 & SS/1) (CA18412a&b) ^[1]				
a	850fr	<i>Hypsibema missouriensis</i> (state dinosaur of Missouri)	†Hadrosauroidae	A
b	850fr	<i>Spinosaurus aegyptiacus</i>	†Spinosauridae	A
c	850fr	<i>Mosasaurus hoffmannii</i>	†Mosasauridae	A
d	850fr	<i>Gorgosaurus libratus</i>	†Tyrannosauridae	A
N/A	SS 3300fr	<i>Fukuisaurus tetoriensis</i>	†Hadrosauroidae	A
	Margin	R: U/I Tyrannosaur attacking U/I dinosaur	†Tyrannosauridae	U Z
COLOMBIA 2018 June 15 (History Festival Foundation) (Single)				
N/A	1000p	Stylized Ammonite	†Ammonoidea	S
DJIBOUTI 2018 June 12 (Dinosaurs) (MS/4 & SS/1) (DJB18315a&b) ^[1]				
1444a	240fr	<i>Velociraptor mongoliensis</i>	†Dromaeosauridae	A
1444b	240fr	<i>Ceratops (=Triceratops) horridus</i>	†Ceratopsidae	A
1444c	240fr	<i>Tyrannosaurus rex</i>	†Tyrannosauridae	A
1444d	240fr	<i>Parasaurolophus walkeri</i>	†Hadrosauridae	A
1464	SS 950fr	<i>Compsognathus longipes</i>	†Compsognathidae	A
	Margin	Ctr: <i>Ceratops (=Triceratops) horridus</i>	†Ceratopsidae	Z
		R: <i>Spinosaurus aegyptiacus</i>	†Spinosauridae	Z
2018 July 27 (Prehistoric Aquatic Animals) (MS/4 & SS/1) ^[1]				
a	240fr	<i>Drepanaspis gemuendenensis</i>	†Psammosteidae	A
b	240fr	<i>Eurhinosaurus longirostris</i>	†Leptonectidae	A
c	240fr	<i>Plesiosaurus dolichodeirus</i>	†Plesiosauridae	A
d	240fr	<i>Dinichthys terrelli</i>	†Dinichthyidae	A
	Margin	Bkgrd: Megalodon tooth, <i>Carcharocles megalodon</i>	†Otodontidae	Z
N/A	SS 950fr	<i>Carcharocles megalodon</i>	†Otodontidae	A
	Margin	Bkgrd: Megalodon tooth, <i>Carcharocles megalodon</i>	†Otodontidae	Z
		UR: <i>Xenacanthus decheni</i>	†Xenacanthidae	Z
		MR: <i>Orthacanthus senckenbergianus</i>	†Orthacanthidae	Z
		LR: <i>Dinichthys terrelli</i>	†Dinichthyidae	Z
ISRAEL 2018 August 28 (Archaeozoology in Eretz Israel) (Set/2)				
N/A	2.50s	Elephant tusk (w/ photo of elephant & Acheulean stonework)		U B
N/A	2.50s	Lioness skull (w/ photo of lioness & Jaffa clock tower)		U B

HUNGARY**2018 September 3** (World of Bakony Dinosaurs) (MS/6)

a	120fo	<i>Ajkaceratops kozmai</i>	†Bagaceratopidae	A
b	120fo	<i>Pneumatoraptor fodori</i>	Clade: Paraves	A
c	120fo	<i>Bakonydraco galaczi</i>	†Tapejaridae	A
d	120fo	<i>Hungarosaurus tormai</i>	†Nodosauridae	A
e	120fo	<i>Iharkutosuchus makadai</i>	†Hylaeochampsidae	A
f	120fo	<i>Pannoniasaurus inexpectatus</i>	†Mosasauridae	A
	Margin	UR: <i>Bakonydraco galaczi</i>	†Tapejaridae	Z

GUINEA**2018 August 8** (Dinosaurs) (MS/4 & SS/1) (GU18311a&b)^[1]

a	12500fr	<i>Beipiaosaurus inexpectus</i>	†Therizinosauroidea	A
b	12500fr	<i>Velociraptor mongoliensis</i>	†Dromaeosauridae	A
c	12500fr	<i>Altirhinus kurzanovi</i>	Order: †Ornithischia	A
d	12500fr	<i>Nasutoceratops titusi</i>	†Ceratopsidae	A
N/A	SS 50000fr	<i>Deinonychus antirrhopus</i>	†Dromaeosauridae	A
	Margin	R: <i>Tyrannosaurus rex</i>	†Tyrannosauridae	Z
		UR & Bot: <i>Dakotaraptor steini</i>	†Dromaeosauridae	Z

MALDIVE ISLANDS**2018 August 8** (Dinosaurs) (MS/4 & SS/1) (MLD18802a&b)^[1]

a	22r	<i>Megalosaurus bucklandii</i>	†Megalosauridae	A
b	22r	<i>Anchiceratops ornatus</i>	†Ceratopsidae	A
c	22r	<i>Garudimimus brevipes</i>	†Deinocheiridae	A
d	22r	<i>Talarurus plicatospineus</i>	†Ankylosauridae	A
N/A	SS 70r	<i>Gigantospinosaurus sichuanensis</i>	Order: †Ornithischia	A
	Margin	UR: <i>Dimorphodon macronyx</i>	†Dimorphodontidae	Z
		LR: <i>Apatosaurus ajax</i>	†Diplodocidae	Z
		LL: <i>Baryonyx walkeri</i>	†Spinosauridae	Z

2018 August 15 (Prehistoric Birds) (MS/4 & SS/1) (MLD18914a&b)^[1]

a	22r	<i>Teratornis merriami</i>	†Teratornithidae	A
b	22r	†Conquered Lorikeet, <i>Vini vidivici</i>	Psittaculidae	A
c	22r	<i>Genyornis newtoni</i>	†Dromornithidae	A
d	22r	†Turtle-jawed Moa-nalo, <i>Chelychelynechen quassus</i>	Anatidae	A
N/A	SS 70r	†Viti Levu Giant Pigeon, <i>Natunaornis gigoura</i>	Columbidae	A
	Margin	R & Bot: †South Island Giant Moa, <i>Dinornis robustus</i>	Dinornithidae	Z

2018 October 4 (Prehistoric Flying Reptiles) (MS/4 & SS/1)^[1]

a	22r	<i>Dimorphodon macronyx</i>	†Dimorphodontidae	A
b	22r	<i>Pteranodon longiceps</i>	†Pteranodontidae	A
c	22r	<i>Dsungaripterus weii</i>	†Dsungaripteridae	A
d	22r	<i>Eudimorphodon ranzii</i>	†Eudimorphodontidae	A
N/A	SS 70r	<i>Quetzalcoatlus northropi</i>	†Azhdarchidae	A
	Margin	LL: <i>Pteranodon longiceps</i>	†Pteranodontidae	Z
		UR: <i>Eudimorphodon ranzii</i>	†Eudimorphodontidae	Z

2018 October 4 (Prehistoric Water Animals) (MS/4 & SS/1)^[1]

a	22r	<i>Liopleurodon ferox</i>	†Pliosauridae	A
b	22r	<i>Stethacanthus altonensis</i>	†Stethacanthidae	A
c	22r	<i>Besanosaurus leptorhynchus</i>	†Besanosauridae	A
d	22r	<i>Kronosaurus queenslandicus</i>	†Pliosauridae	A
N/A	SS 70r	<i>Mosasaurus hoffmannii</i>	†Mosasauridae	A
	Margin	UL: <i>Stethacanthus altonensis</i>	†Stethacanthidae	Z
		LL: <i>Liopleurodon ferox</i>	†Pliosauridae	Z

MOZAMBIQUE		2018 June 15 (Prehistoric Water Animals) (MS/4 & SS/1) ^[1]		
a	116m	<i>Nothosaurus mirabilis</i>	†Nothosauridae	A
b	116m	<i>Carcharocles megalodon</i>	†Otodontidae	A
c	116m	<i>Mesosaurus tenuidens</i>	†Mesosauridae	A
d	116m	Bot: <i>Tylosaurus proriger</i>	†Mosasauridae	B
		Top: <i>Diplocaulus magnicornis</i>	†Diplocaulidae	B
N/A	SS 300m	<i>Mosasaurus hoffmannii</i>	†Mosasauridae	A
	Margin	UR: <i>Dunkleosteus terrelli</i>	†Dunkleosteidae	Z
		Ctr: <i>Henodus chelyops</i>	†Henodontidae	Z
		LL: <i>Ichthyosaurus communis</i>	†Ichthyosauridae	Z
		LR: <i>Thalattoarchon saurophagis</i>	Order: †Ichthyosauria	Z
		2018 August 15 (Dinosaurs) (MS/4 & SS/1) (MOZ18406a&b) ^[1]		
a	116m	<i>Lambeosaurus lambei</i>	†Hadrosauridae	A
b	116m	<i>Brachiosaurus altithorax</i>	†Brachiosauridae	A
c	116m	<i>Ceratops (=Triceratops) horridus</i>	†Ceratopsidae	A
d	116m	<i>Nanotyrannus lancensis</i>	†Tyrannosauridae	A
N/A	SS 300m	<i>Stegosaurus stenops</i>	†Stegosauridae	A
	Margin	Ctr: <i>Velociraptor mongoliensis</i>	†Dromaeosauridae	Z
		Bot: <i>Rhamphorhynchus etchesi</i>	†Rhamphorhynchidae	Z
		LR: <i>Tyrannosaurus rex</i>	†Tyrannosauridae	Z
ST. THOMAS & PRINCE IS.		2018 July 23 (Dinosaurs) (MS/4 & SS/1) (ST18303a&b) ^[1]		
a	31d	<i>Spinosaurus aegyptiacus</i>	†Spinosauridae	A
b	31d	<i>Archaeoceratops oshimai</i>	†Archaeoceratopsidae	A
c	31d	<i>Amargasaurus cazau</i>	†Dicraeosauridae	A
d	31d	<i>Parasaurolophus walkeri</i>	†Hadrosauridae	A
N/A	SS 124d	<i>Centrosaurus apertus</i>	†Ceratopsidae	A
	Margin	LR: <i>Barosaurus lentus</i>	†Diplodocidae	Z
		Bot: <i>Dilophosaurus wetherilli</i>	†Dilophosauridae	Z
SIERRA LEONE		2018 June 29 (Prehistoric Flying Reptiles) (MS/4 & SS/1) ^[1]		
a	9800le	<i>Dimorphodon macronyx</i>	†Dimorphodontidae	A
b	9800le	<i>Quetzalcoatlus northropi</i>	†Azhdarchidae	A
c	9800le	<i>Peteinosaurus zambelli</i>	Clade: †Eopterosauria	A
d	9800le	U/I Pterosaur	Order: †Pterosauria	U A
N/A	SS 40000le	<i>Pteranodon longiceps</i>	†Pteranodontidae	A
	Margin	UR: <i>Dimorphodon macronyx</i>	†Dimorphodontidae	Z
		LR: <i>Zhejiangopterus linhaiensis</i>	†Azhdarchidae	Z
		2018 July 27 (Prehistoric Water Animals) (MS/4 & SS/1) ^[1]		
a	9800le	<i>Ichthyosaurus communis</i> (also LR margin)	†Ichthyosauridae	A Z
b	9800le	<i>Liopleurodon ferox</i> (also LL margin)	†Pliosauridae	A Z
c	9800le	<i>Eurypterus remipes</i> (also UR margin)	†Eurypteridae	A Z
d	9800le	<i>Elasmosaurus platyurus</i>	†Elasmosauridae	A
	Margin	UL: <i>Dunkleosteus terrelli</i>	†Dunkleosteidae	Z
N/A	SS 40000le	<i>Dunkleosteus terrelli</i>	†Dunkleosteidae	A
	Margin	R: † <i>Livyatan melvillei</i>	Physeteroidea	Z
		L: <i>Ichthyosaurus communis</i>	†Ichthyosauridae	Z
		2018 August 30 (Dinosaurs) (MS/4 & SS/1) (SRL18703a&b) ^[1]		
a	9800le	<i>Spinosaurus aegyptiacus</i>	†Spinosauridae	A
b	9800le	<i>Velociraptor mongoliensis</i>	†Dromaeosauridae	A
c	9800le	<i>Beipiaosaurus inexpectus</i>	†Therizinosauroidea	A
d	9800le	<i>Altirhinus kurzanovi</i>	Order: †Ornithischia	A

SIERRA LEONE (continued)

N/A	SS 40000le	<i>Nasutoceratops titusi</i>	†Ceratopsidae	A
	Margin	R: <i>Altirhinus kurzanovi</i>	Order: †Ornithischia	Z

TOGO**2018 June 28** (Dinosaurs) (MS/4 & SS/1) (TG18306a&b)^[1]

a	800fr	<i>Alectrosaurus olseni</i>	†Tyrannosauroidae	A
b	800fr	<i>Giganotosaurus carolinii</i>	†Carcharodontosauridae	A
c	800fr	<i>Ceratops (=Triceratops) horridus</i>	†Ceratopsidae	A
d	800fr	<i>Anhanguera piscator</i>	†Anhangueridae	A
N/A	SS 3300fr	<i>Mosasaurus hoffmannii</i>	†Mosasauridae	A
	Margin	L: <i>Liopleurodon ferox</i>	†Pliosauridae	Z
		Ctr: U/I Ammonite	†Ammonoidea	U Z

2018 June 28 (Extinct Animals) (MS/4 & SS/1) (TG18311a&b)^[1]

a	800fr	†Giant Elk, <i>Megaloceros giganteus</i>	Cervidae	A
b	800fr	†Haast's Eagle, <i>Harpagornis moorei</i>	Accipitridae	A
c	800fr	†Japanese Wolf, <i>Canis lupus ssp. hodophilax</i>	Canidae	A
d	800fr	†Golden Toad, <i>Incilius periglenes</i>	Bufoidea	A
N/A	SS 3300fr	†Pinta Island Tortoise, <i>Chelonoidis abingdonii</i>	Testudinidae	A
	Margin	L: †Mammoth, <i>Mammuthus primigenius</i>	Elephantidae	Z

Other Stamps to Consider**AUSTRALIA****2018 June 12** (Art in Nature) (SS/4 & Bklt/10)

This stamp issue shows aerial photographs illustrating the exquisite beauty found in the country's natural landforms. One of these stamps shows a landscape of Shark Bay, Western Australia.

4814	\$1	Shark Bay, Western Australia		R
4817a		SS/4 (Sc#4814–17) (perf 14½×14)		
4818	\$1	Shark Bay, Western Australia		R
4818a		Bklt/10 (Sc#4818) (die cut 10¾×11) (s/a)		

Shark Bay, Western Australia: Located about half way up Western Australia's west coast, Shark Bay is a spectacular World Heritage-listed area that stretches along 1,500 kilometers of coastline. It includes several islands, white sand beaches, red cliffs, and tranquil turquoise lagoons and is home to remarkable biological diversity and marine life. Showing the shifting sands of this coastal idyll, the photograph was taken on a Phase One IQ280 80 mega pixel camera by Christian Fletcher.

Shark Bay is also one of the few places where scientists can study modern stromatolites—a bacterial-sediment structure. Stromatolites make up the majority of fossils from the Precambrian. The Bay is very hypersaline, which is likely why the stromatolites can grow into the larger structures. In other parts of the world, grazing snails, echinoids, and other animals eat the bacterial mats faster than they accumulate, so we do not see stromatolites except in places where environmental conditions are too harsh for the grazers. Shark Bay is also a World Heritage Site (<https://www.sharkbay.org>).

BELGIUM**2018 June 11** (Africa Museum) (MS/5)

N/A	(€1.13)	Various objects from collection and view of museum exterior		R
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The Africa Museum is recognized worldwide for its rich, varied, and scientifically valuable collections. The majority of its visitors are unaware of the size of this heritage as the permanent exhibition only has about one percent of its holdings on display. The museum is known for its ethnographic objects, but its natural science collections, archives, and photos are equally remarkable.

The vast majority of the objects come from the Congo Democratic Republic and were collected during the colonial period. However, the museum's collections contain specimens from around the world, dating back 650 million years (for some of the fossils) to the present day. The fossil collection has more than 18,000 specimens from Central Africa, collected through fieldwork, or acquired through donations.

The collection is very diverse in terms of types of specimen (from the remains of large reptiles to microscopic skeletons of unicellular organisms) and in terms of age (approximately 650 million years to a few thousand years). Examples of large specimen series include: stromatolites from the Neoproterozoic (Lower Congo, Katanga, Kasai), plant fossils from the Carboniferous-Permian (Katanga), fish fossils from the Jurassic-Cretaceous of the Congo Basin, and a diverse fauna from the Cretaceous-Cenozoic of the Atlantic coastal region (Lower Congo, Angola, Congo-Brazzaville, Gabon). Visit their website for more information (www.africamuseum.be/).

GIBRALTAR **2018 May 18** (100th anniv. Royal Air Force) (Set/6 & SS/4)

Three stamps in the Set/6 and each of the four stamps in the SS show the Rock of Gibraltar in the background. The rock formation is famous for the discovery of Neanderthal fossils. The Rock of Gibraltar and Neanderthals are depicted on many Gibraltar stamps since 1973.

1670	22p	Rock of Gibraltar (w/ Supermarine Spitfire Mark V)	R
1674	£2	Rock of Gibraltar (w/ Vickers Wellington Mark IC)	R
1675	£3	Rock of Gibraltar (w/ Lockheed Hudson III)	R
1676		SS/4 (Sc#1676a-d)	R

2018 July 31 (Views from the Rock) (Set/6)

Four of these stamps include the Rock of Gibraltar itself in the design.

N/A	64p	Rock of Gibraltar	R
N/A	70p	Rock of Gibraltar	R
N/A	80p	Rock of Gibraltar	R
N/A	£1	Rock of Gibraltar	R

ST. THOMAS & PRINCE IS. **2018 September 28** (Stamps-on-Stamps) (2ea SS/1)^[1]

N/A	SS 25d	† <i>Homo neanderthalensis</i> (Burundi Sc#1390b s-o-s)	Hominidae	C
N/A	SS 124d	† <i>Homo neanderthalensis</i> (Burundi Sc#1390b s-o-s)	Hominidae	C

Postmarks

JAPAN **2018 September 1**

2018.09.01–2018.10.15 Postmark: “National Sports Festival 2015” in Fukui Prefecture with Dinosaur fossil from Dinosaur Museum of Fukui on top side.

Future Issues

2018.Q4: **Armenia:** “Flora and fauna of the ancient world.” Perhaps some more dinosaur stamps, similar to stamps set of 2017.

Next Year:

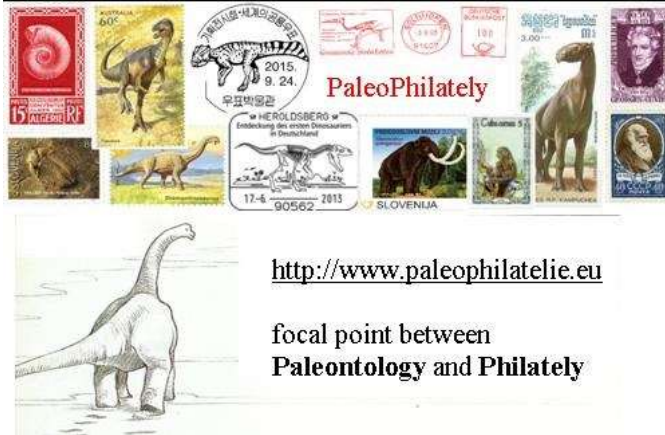
2019.03.??: **Slovenia:** Oligocene Mammal Fossil: *Anthracotherium*.

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>.



<http://www.paleophilatelie.eu>

focal point between
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



ARCHAEOZOOLOGY IN ERETZ ISRAEL

Archaeozoology is the scientific field that studies animal bones found in archeological excavations. A number of unique finds have been made in excavations in Eretz Israel, including: the bones of a Syrian bear in Tel Hadid dating from the Iron Age (Israelite) (930–586 BCE). The remains of an ancient hippopotamus from the Pottery Neolithic Period (5500–4500 BCE) were also discovered in the Ramat Aviv area of Tel Aviv. The Israel Philatelic Service previously issued a stamp featuring a dinosaur whose fossilized footprints were discovered on the banks of the Tethys Sea, on a kibbutz near Jerusalem.

On 28 August 2018, Israel Post issued a pair of 2.50s stamps commemorating Archaeozoology in Eretz Israel (Land of Israel). One stamp shows an elephant tusk relic on display in the pre-historic exhibit at the Israel Museum, alongside elephant bones from the Daughters of Jacob Bridge. The tusk dates to the early Stone Age (1 million to 120,000 years ago).

The stamp also features a stock photo of a modern elephant and Acheulean stone work from the Design Museum Holon.

The second stamp shows a lioness skull that, until recently, was kept on the top floor of the Jaffa Museum. Archeologist Dr. Jacob Kaplan believed that the place where the lioness remains were discovered was a pre-Philistine temple thought to be dedicated to the lion.

The remains were dated to the late Bronze Age when the sea people (including the Philistines) entered Eretz Israel from the south. Until recently, the skull was kept on the top floor of the Jaffa Museum. The stamp also shows a stock photo of a modern lioness and the Jaffa Clock Tower.

The stamps were designed by Ronen Goldberg and printed in sheets of 15 with five tabs using the offset method by Cartor Security Printing in France.



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.americantopicalasn.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>

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

<https://entomologytoday.org/>

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>

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)		

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	imperforate	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		

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ATA's Handbook 167, *What's First? From Abacus to Zebra: The First Time Topics and Pictured on Postage Stamps*, illustrates and describes more than 800 topical firsts. They range from common topics, such as the first ship to more esoteric ones, such as the first handshake.

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