

Endless forms most beautiful – Ground beetles (Coleoptera: Carabidae) on postal stamps

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Abstract: Many people, entomologists, and nonprofessional alike, are avid collectors of stamps portraying insects. In this article I review the number of official and published postal stamps featuring ground beetles (Coleoptera: Carabidae) from 1953 to 2017, covering a time period of more than 60 years. Whereas stamps depicting other popular insect taxa, e.g., butterflies, are much more numerous, my review gave evidence for a steadily increase of ground beetle stamps over time and a broad variety of featured species. My study revealed 130 stamps featuring 83 different carabid species on postal stamps of 72 states. On total average, two stamps per year were published. From the beginning of the 1990ths to 2017, however, this number increased to an average number of three stamps per year. The highest number of carabid stamps ($n = 6$) were published in Vietnam so far. The most featured species was the forest caterpillar hunter *Calosoma sycophanta* (LINNAEUS, 1758) on 12 stamps, followed by the green tiger beetle *Cicindela campestris* LINNAEUS, 1758 (9 stamps) and the golden ground beetle *Carabus auronitens* FABRICIUS, 1792 (8 stamps). Colorful and large species of the genera *Carabus*, *Calosoma*, and *Cicindela* were dominant on the published stamps, whereas many species ($n = 58$, 69.9%) were featured only once.

Keywords: *Carabus*, *Calosoma*, *Cicindela*, entomophilately, philately, stamp collections

Introduction

The collection of stamps has been one of the most popular hobbies in the world. Of all the reasons why people collect stamps, their inherent design and beauty are perhaps the most important reason and motivation: Stamps can represent miniature works of art and can become valuable, rare collectibles over time. Furthermore they are also contemporary witnesses, documenting the spirit of time when they were published. Stamp collecting started in the late nineteenth century with the rapid global growth of the postal service system. It represents one field that make up the wider subject of philately, which is defined as the study of stamps and related items, e.g., postmarks, first day covers, proofs, or essays. One of the major developments in philately is the increasing popularity of the collection of so-called “topical” or “thematical” motifs on stamps, for example aircrafts, artists, plants, or birds (COVELL Jr 2009). Due to their essential economic and ecologic relevance but also amazing diversity and beauty it is not surprising that insects have become featured on stamps for a long time. Here, the term entomophilately describes the

collection and study of insect-related stamps (HAMEL 1990). Following the pioneering and detailed studies of DENNIS HAMEL, the probably earliest stamp showing an insect was issued by Nicaragua in the year 1891 (HAMEL 1990), but it was only after the end of World War II that the number of insects appearing on stamps increased significantly. In most cases, aesthetically attractive species are featured, e.g., large, colorful tropical butterflies, but various stamps also focus on infamous pest species, e.g., the *Anopheles* mosquitos. Until 1990, about 4,600 insects were found on stamps (HAMEL 1990), with butterflies representing the most published insect order by far (68.4 %), followed by beetles (9.8 %), and flies (9.1 %) (Fig. 1). Another publication counts over 5,000 stamps by over 300 countries until 1991, depicting over 1,300 insect species (COVELL Jr 2009). Detailed information about the shown taxa, however, is not provided. Up-to-date data of insects on stamps are missing, but it can be expected that the shown tendencies of depicted insect taxa of the past are still given. In the case of carabids, the first stamps featuring ground beetles (Coleoptera: Carabidae) were published in Portuguese Guinea-

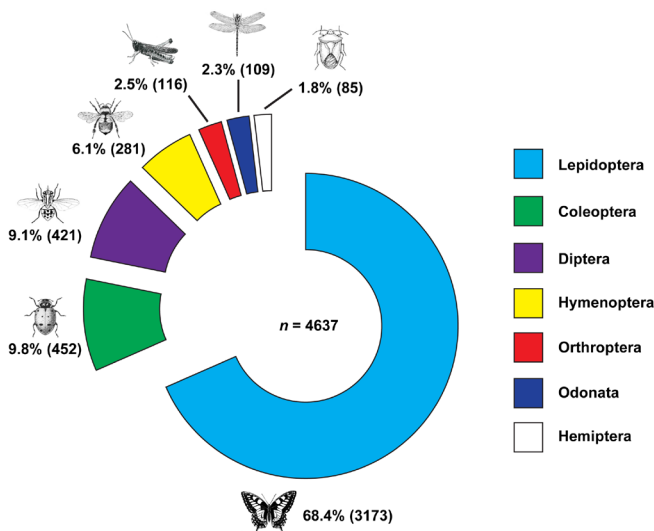


Fig. 1: Major insect orders published on stamps. Based on data from HAMEL (1990).

Bissau in the year 1953 (KABOUREK 2017) and show drawings of four species: *Anthia nimrod* (FABRICIUS, 1793), *Cicindela brunet* GORY, 1833, *Colliuris dimidiata* CHAUDOIR, 1848, and *Craspedophorus brevicollis* (DEJEAN, 1831) (Fig. 2).

Parallel to the increase of stamps featuring insects, the general interest in entomophilately rose continuously. Various detailed thematic catalogues have been published (e.g., STANLEY 1979, AGGERSBERG 1991, HAMEL 1991, WRIGHT 2014) as well as articles about entomophilately in general (e.g., MARTIN 1975, HAMEL 1990, BONAFONTE 2000, COVELL Jr 2009). Other publications focused on the diversity of insect species on stamps of specific states, e.g., Mexico (MENDOZA RAMÍREZ et al. 2006), or specific collections (COSTA NETO 2002). A first taxonomic compilation of philatelic Lepidoptera was

published in the 1960s (HESSEL 1968), followed by a review of stamps featuring bees (PREUSS 1973) and detailed lists for beetles shown on stamps by WILHELM LUCHT (1987, 1991, 1994). Furthermore, a recent published article summarizes the history of Coleoptera depicted on stamps, with a specific focus on "Carabinae and Cicindelidae" (KABOUREK 2017). Unfortunately, this study is quite incomplete, because most carabid-featuring stamps were not discussed and/or recorded.

In this article I review the number of published stamps with ground beetles (including tiger beetles) from 1953 to 2017 systematically, covering a time period of more than 60 years. I summarize

the featured carabid species as well as the states that published ground beetles stamps in detail. Furthermore I analyze the publication rates of carabid stamps over time.

Material and Methods

My survey is based on own data as well as public information provided by the comprehensive and excellent insect stamp compilations of Mr. MASAKAZU NAITO (<http://www.asahi-net.or.jp/~CH2M-NITU/indexe.htm>) (Access: March-20-2018) and Mr. PATRICE BONAFONTE (http://patrice.bonafonte.free.fr/coleos/index_us.html) (Access: March-20-2018). I used some specific guidelines for my review. First, the carabid beetle must represent the dominant part of the stamp and does not have to act as supplement

Fig. 2: The first ground beetles on stamps, published in Portuguese Guinea-Bissau in the year 1953. From the left to the right: *Craspedophorus brevicollis* (DEJEAN, 1831), *Anthia nimrod* (FABRICIUS, 1793), *Cicindela brunet* GORY, 1833, and *Colliuris dimidiata* CHAUDOIR, 1848.



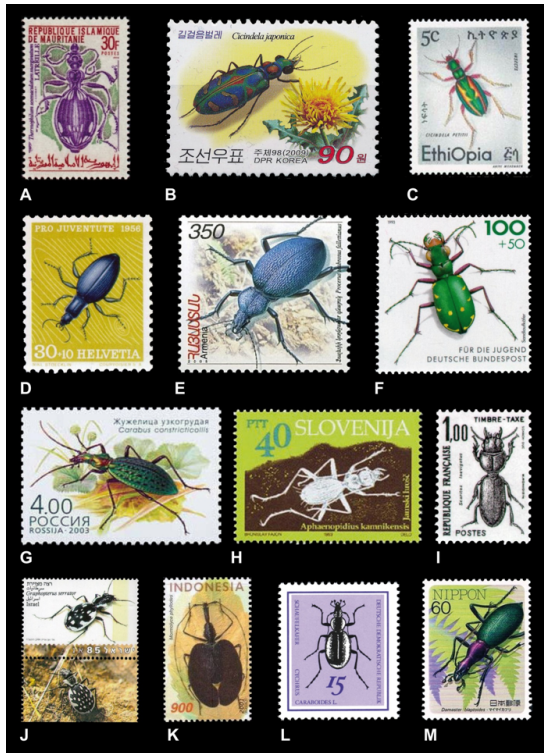


Fig. 3: Collage of various postal stamps featuring ground beetles. A: *Anthia sexmaculata* (FABRICIUS, 1787) (Mauritania 1970), B: *Cicindela chinensis* DEGEER, 1774 (South Korea 1991), C: *Cicindela petiti* (GUERIN-MENEVILLE, 1845) (Ethiopia 1977), D: *Carabus intricatus* LINNAEUS, 1761 (Switzerland 1956), E: *Procerus scabrosus* OLIVIER, 1795 (Armenia 2006), F: *Cicindela campestris* LINNAEUS, 1758 (Federal Republic of Germany 1993), G: *Carabus constricticollis* KRAATZ, 1886 (Russia 2003), H: *Aphaenopodius kannikensis* DROVENIK, 1987 (Slovenia 1993), I: *Scarites laevigatus* FABRICIUS, 1792 (France 1982), J: *Graphipterus serrator* FORSKAL, 1775 (Israel 1994), K: *Mormolyce phyllodes* HAGENBACH, 1825 (Indonesia 2001), L: *Cychrus caraboides* (LINNAEUS, 1758) (German Democratic Republic 1968), and M: *Damaster blaptoides* (KOLLAR, 1836) (Japan 1986).

tary element only. Second, the taxonomic carabid classification relies on the used species names on the stamps. It should be noted, however, that in various cases the published species names may be incorrect or outdated, but as a consequence of the simplified drawing it is hard or even impossible to identify which species is depicted on the stamp. Third, my data set comprised only stamps of internationally recognized states of present or the past (e.g., the Soviet Union), former colonies (e.g., Portuguese Guinea-Bissau), or overseas territories (e.g., the Falkland Islands as part of the British Overseas Territories). Postal stamps of internationally non-recognized states (e.g., Abkhazia) and illegal/non-official stamps were not taken into account.

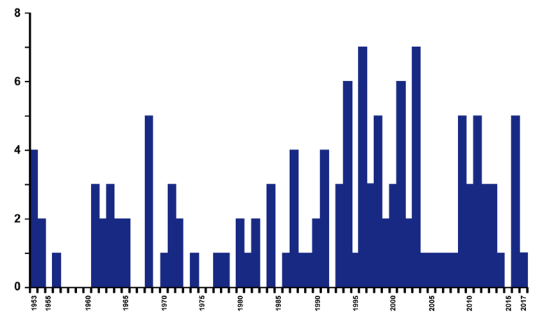


Fig. 4: Annual number of carabid stamp issues from 1953 to 2017. With x-axis = time scale and y-axis = number of stamps per year.

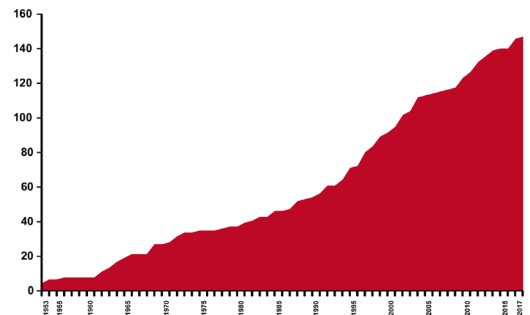


Fig. 5: Accumulation of carabid stamps from 1953 to 2017. With x-axis = time scale and y-axis = number of stamps in total.

Results

For the surveyed period of time, a total number of 130 stamps featuring ground beetles from 72 different states were found (Fig. 3, Tab. 1). The majority of publishing states are located in Africa ($n = 24$; 33.3%), Europe ($n = 22$; 30.6%) and Asia ($n = 20$; 27.8%). Interestingly, only two states from South America ($n = 2$; 2.8%) have published stamps featuring ground beetles so far, whereas the remaining four states (5.5%) are part of North and Central America. Most carabid stamps were published in Vietnam ($n = 6$), followed by eight states with each four stamps. The highest number of published stamps per year was found for 1996 and 2007 (both $n = 7$) (Fig. 4). On total average, two stamps per year were published. From the beginning of the 1990ths to 2017, however, there is a significant increase of ground beetle stamps (Fig. 4, Fig. 5), up to an average number of three stamps per year (Tab. 1).

In terms of carabids, 83 different species were found in total. The most featured species was the

Tab. 1: A systematic review of stamps featuring ground beetles species per state and year of publication. The analyzed time period ranges from 1953 to 2017. With n = number of stamps. Asterisks (*) indicate scientific incorrect and putative misspelled species.

No.	Species	n	State
1	<i>Anophthalmus</i> sp.	1	Yugoslavia 1984
2	<i>Anthia duodecimguttata</i> BONELLI, 1813	2	Qatar 1998, United Arab Emirates 1999
3	<i>Anthia nimrod</i> (FABRICIUS, 1793)	1	Portuguese Guinea-Bissau 1953
4	<i>Anthia sexmaculata</i> (FABRICIUS, 1787)	4	Spanish Sahara 1965 (2x), Mauritania 1970, Democratic Republic Congo 2013
5	<i>Anthia thoracica</i> (THUNBERG, 1784)	1	Guinea 2001
6	<i>Aphaenopidius kamnikensis</i> DROVENIK, 1987	1	Slovenia 1993
7	<i>Aplothorax burchelli</i> WATERHOUSE, 1841	1	British Overseas Territories St. Helena 1982
8	<i>Brachinus</i> sp.	1	United States of America 1999
9	<i>Brachinus</i> sp.	1	Marshall Islands 2002
10	<i>Brachinus nobilis</i> DEJEAN, 1831	1	Qatar 1998
11	<i>Calleida suturalis</i> DEJEAN, 1831	1	Argentina 1990
12	<i>Callisthenes semenovi</i> MOTSCHULSKY, 1859	1	Kazakhstan 2008
13	<i>Calosoma fischeri</i> FISCHER VON WALDHEIM, 1842	1	Mongolia 1972
14	<i>Calosoma scrutator</i> (FABRICIUS, 1781)	2	Mali 2010, The Gambia 2012
15	<i>Calosoma splendidum</i> BREUNING, 1927	1	Cuba 1980
16	<i>Calosoma sycophanta</i> (LINNAEUS, 1758)	13	Poland 1961, Czechoslovakia 1962, Bulgaria 1968, Turkey 1980, Yugoslavia 1994, Madagascar 1994, Romania 1996, Moldova 1997, Somalia 1998, Cambodia 2000, Guinea 2001, Russia 2003
17	<i>Calosoma</i> sp.	1	Belize 1995
18	<i>Carabus arvensis</i> HERBST, 1784	1	German Democratic Republic
19	<i>Carabus auratus</i> LINNAEUS, 1761	1	Belgium 1974
20	<i>Carabus auronitens</i> FABRICIUS, 1792	8	Poland 1961, Cambodia 1988, Togo 1996, Cambodia 1998, Guinea 2009, Central Africa 2011, Hungary 2014, France 2017
21	<i>Carabus cancellatus</i> ILLIGER, 1798	1	Belarus 2016
22	<i>Carabus caucasicus</i> ADAMS, 1817	1	Russia 2003
23	<i>Carabus clathratus</i> LINNAEUS, 1761	2	Moldova 2009, Belarus 2016
24	<i>Carabus constricticollis</i> KRAATZ, 1886	1	Russia 2003
25	<i>Carabus fabricii</i> PANZER, 1812	1	Romania 1964
26	<i>Carabus hispanus</i> FABRICIUS, 1787	1	Montserrat 1994
27	<i>Carabus intricatus</i> LINNAEUS, 1761	3	Switzerland 1956, Czechoslovakia 1962, Belarus 2016
28	<i>Carabus lopatini</i> NORAWITZ, 1886	1	Russia 2003
29	<i>Carabus nitens</i> LINNAEUS, 1758	1	Belarus 2016
30	<i>Carabus tauricus</i> BONELLI, 1810	1	Vietnam 1996
31	<i>Carabus variolosus</i> FABRICIUS, 1787	1	Slovenia 2009
32	<i>Carabus violaceus</i> LINNAEUS, 1758	1	Poland 1961
33	<i>Carabus</i> sp.	1	Algeria 2000
34	<i>Carabus</i> sp.	1	Monaco 1987
35	<i>Carabus</i> sp.	1	United Arab Emirates 1972
36	<i>Cicindela barbara</i> LAPORTE, 1840	1	Chad 1996
37	<i>Cicindela aurulenta</i> FABRICIUS, 1801	1	Vietnam 1994
38	<i>Cicindela brunet</i> GORY, 1833	1	Portuguese Guinea-Bissau 1953
39	<i>Cicindela campestris</i> LINNAEUS, 1758	9	German Democratic Republic 1968, Belgium 1971, Turkey 1981, Federal Republic of Germany 1993, Cambodia 2000, Guinea 2001, Eire 2003, Comoros 2009, Eire 2010
40	<i>Cicindela cancellata</i> DEJEAN, 1825	1	Kenia 2011
41	<i>Cicindela chinensis</i> DEGEER, 1774	3	North Korea 1963, Mongolia 1991, South Korea 1991

Tab. 1 continued

No.	Species	n	State
42	<i>Cicindela hybrida</i> LINNAEUS, 1758	3	Albania 1963, Denmark 2007, Channel Islands 2013
43	<i>Cicindela japonica</i> THUNBERG, 1781	2	Vietnam 1996, North Korea 2009
44	<i>Cicindela lunulata</i> FABRICIUS, 1781	1	Senegal 1997
45	<i>Cicindela marginipennis</i> DEJEAN, 1831	1	Mozambique 2012
46	<i>Cicindela petiti</i> (GUERIN-MENEVILLE, 1845)	1	Ethiopia 1977
47	<i>Cicindela puritana</i> (HORN, 1871)	1	Mozambique 2012
48	<i>Cicindela regalis</i> (DEJEAN, 1831)	3	Democratic Republic Congo 1971, South Africa 1987, Zambia 2005
49	<i>Cicindela silvicola</i> DEJEAN, 1822	1	Equatorial Guinea 1978
50	<i>Cicindela splendida</i> HENTZ, 1830	1	Mali 2011
51	<i>Cicindela theatina</i> ROTGER, 1944	1	Mali 2010
52	<i>Cicindela tennipes</i> *	1	Vietnam 1994
53	<i>Cicindela</i> sp.	1	Niger 1987
54	<i>Cicindela</i> sp.	1	Monaco 1987
55	<i>Clivina subterranea</i> DECU, NITZU & JUBERTHIE, 1994	1	Romania 1993
56	<i>Colliuris dimidiata</i> CHAUDOIR, 1848	1	Portuguese Guinea-Bissau 1953
57	<i>Colliuris</i> sp.	1	Vietnam 1994
58	<i>Coptolabrus coelestis</i> STEWART, 1855	1	Mongolia 1991
59	<i>Craspedophorus brevicollis</i> (DEJEAN, 1831)	1	Portuguese Guinea-Bissau 1953
60	<i>Cychrus caraboides</i> (LINNAEUS, 1758)	1	German Democratic Republic 1968
61	<i>Cypholoba perspicillaris</i> (CHAUDOIR, 1878)	1	Kenia 2011
62	<i>Damaster blaptoides</i> (KOLLAR, 1836)	1	Japan 1986
63	<i>Damaster constricticollis</i> (KRAATZ, 1886)	1	North Korea 1989
64	<i>Graphipterus serrator</i> FORSKAL, 1775	1	Israel 1994
65	<i>Lissopterus quadrimaculatus</i> WATERHOUSE, 1843	1	British Overseas Territories Falklands 1984
66	<i>Megacephala catenulata</i> BASILEWSKY, 1950	1	Democratic Republic Congo 1971
67	<i>Megacephala megacephala</i> (OLIVIER, 1790)	1	Ghana 1991
68	<i>Metius blandus</i> (DEJEAN, 1828)	1	British Overseas Territories Falklands 1984
69	<i>Mormolyce phyllodes</i> HAGENBACH, 1825	3	Indonesia 2001, Thailand 2001, Palau 2003
70	<i>Mormolyce</i> sp.	1	Malaysia 2013
71	<i>Mouhotia batesi</i> LEWIS, 1879	2	Thailand 2001, Laos 2002
72	<i>Nebria gyllenhali</i> (SCHONHERR, 1806)	1	Iceland 2004
73	<i>Odontocheila tawabka</i> JOHNSON, 1996	1	Honduras 2003
74	<i>Ophionea nigrofasciata</i> SCHMIDT-GOBEL, 1846	1	Vietnam 1996
75	<i>Pheropsophus jessoensis</i> (A. MORAWITZ, 1862)	1	North Korea 1990
76	<i>Procerus gigas</i> CREUTZER, 1799	3	Yugoslavia 1954, Albania 1963, Romania 1964
77	<i>Procerus scabrosus</i> OLIVIER, 1795	2	Bulgaria 1968, Armenia 2006
78	<i>Scarites guineensis</i> DEJEAN, 1831	1	Qatar 1998
79	<i>Scarites laevigatus</i> FABRICIUS, 1792	1	France 1982
80	<i>Sphaeroderus nitidicollis</i> GUERIN-MENEVILLE, 1829	1	Mali 2011
81	<i>Tachyta nana</i> (GYLLENHAL, 1810)	1	Bhutan 1997
82	<i>Therates nepalensis</i> PROBST & WIESNER, 1994	1	Nepal 2016
83	<i>Zabrus tenebrioides</i> GOEZE, 1777	1	Hungary 1954

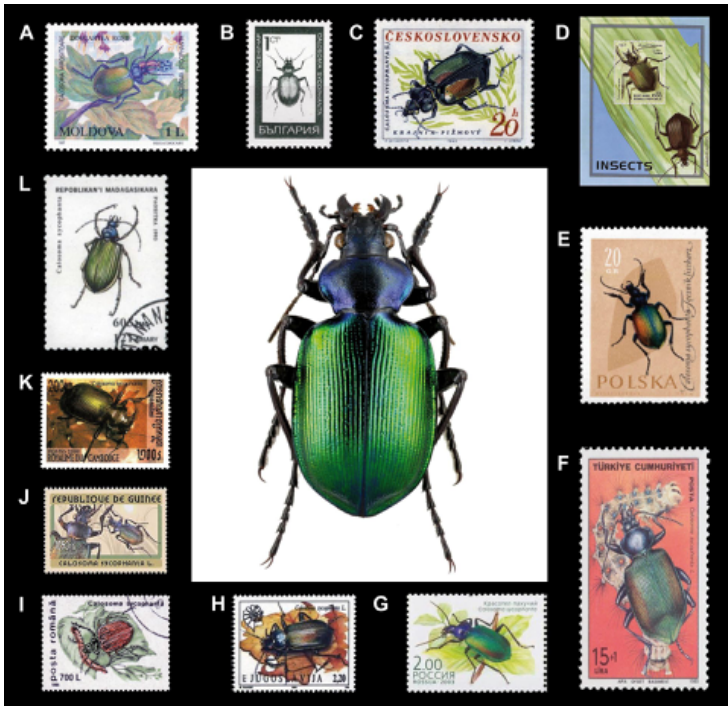


Fig. 6: The forest caterpillar hunter *Calosoma sycophanta* (LINNAEUS, 1758) featured on postal stamps. A: Moldavia 1997, B: Bulgaria 1968, C: Czechoslovakia 1962, D: Somalia 1998, E: Poland 1961, F: Turkey 1980, G: Russia 2003, H: Yugoslavia 1994, I: Romania 1996, J: Guinea 2001, K: Cambodia 2000, and L: Madagascar 1994. The image of *Calosoma sycophanta* was taken from www.eurocarabidae.de.

forest caterpillar hunter *Calosoma sycophanta* (LINNAEUS, 1758) on 12 stamps from 12 states (Fig. 6, Tab. 1), followed by the green tiger beetle *Cicindela campestris* LINNAEUS, 1758 (9 stamps from 9 states) and the golden ground beetle *Carabus auronitens* FABRICIUS, 1792 (8 stamps from 8 states) (Tab. 1). For 11 beetles (8.4%), only the genus was provided (Tab. 1). One species name is unknown: “*Cicindela tennipes*” (Vietnam 1994). A high number of species ($n = 58$, 69.9%), however, was featured only once. Stamps showing species of the genera *Cicindela* ($n = 34$, 26.2%), *Carabus* ($n = 28$, 21.5%), and *Calosoma* ($n = 17$, 13.1%) were dominant on the published stamps. In most cases, ground beetle stamps were part of stamp series that show a broad variety of different insect or invertebrate species, for example beneficial insects (Federal Republic of Germany 1993). On the other hand, stamp series that specifically focus only on ground beetles are very rare, e.g., the *Carabus* series of Belarus from 2016.

Discussion

While ground beetles represent well-known and common insects that have been studied intensively from an entomological perspective for a long time, their

number on stamps - in comparison to other insect taxa - is quite low. Based on the data of HAMEL (1990) and own results, 50 stamps featuring ground beetles were published until 1990, representing 11.1% of all beetle stamps and only 1.1% of all insect stamps ($n = 4637$) at this year (Tab. 1, Fig. 1). It can be suggested that this ratio has not changed significantly until now. However, some general trends can be noted: First, similar to other taxa (e.g., butterflies), large, colorful and often exotic species are commonly featured on stamps. In the case of ground beetles, images of species of the attractive genera *Calosoma*, *Carabus*, and *Cicindela* are dominant. Interestingly, some of these species are published in countries where they do not occur, for example a stamp featuring *Calosoma sycophanta* that was published in Somalia 1998 or *Cicindela campestris* which is found on a stamp from the Comoros in 2009. Second, the number of stamps featuring ground beetles is increasing. With only one exception (2015), at least one stamp showing carabid beetles has been published from 1993 until 2017. This finding correlates with the increase of the average number of published ground beetle stamps per year. Third, the quality of the presented beetles varies significantly. In his recent paper, KABOUREK (2017) already wrote: “The beetles depicted on some stamps

are stylized so heavily that sometimes they can only be identified to the family level.” While early carabid beetle images were simplified, schematic, and/or idealized (e.g., *Calosoma sycophanta* (Bulgaria 1968)), various recent stamps are characterized by more realistic drawings (e.g., *Carabus constricticollis* (Russia 2003)), or even the use of high-quality images (e.g., *Graphipterus serrator* (Israel 1994)). Furthermore, the taxonomic classification of various shown carabid species may be incorrect. Again, KABOUREK (2017) discussed this issue: “Therefore, it is inevitable that not all Latin names of the insects listed herein are correct.” As part of the analyzed data set, one species name is unknown: “*Cicindela tennipes*” (Vietnam 1994) obviously represents a *nomen nudum* and was probably misspelled (see also KABOUREK 2017).

Entomophilately keeps alive the thrill of the hunt and the love of the beauty and order of an insect collection but without killing animals (COVELL JR 2009). In comparison to other insect taxa, however, the proportion of stamps featuring ground beetles is still low. Similar to their living counterparts, numerous stamps are highly aesthetic and beautiful. Following this observation, I hope that carabidologists become more interested and motivated not to collect ground beetles only but also ground beetle stamps, making this interesting hobby more popular.

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