

NORTH AMERICAN GROUND-BEETLES  
(COLEOPTERA, CARABIDAE, EXCLUDING  
CICINDELINAE) DESCRIBED BY THOMAS SAY:  
DESIGNATION OF LECTOTYPES AND NEOTYPES

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INTRODUCTION

Thomas Say (1787-1834) was the founder of scientific entomology and conchology in North America. He described an immense number of insects of all orders, among the Carabidae (incl. Cicindelinae) no less than 165 species. They were included in the following eight papers:

1817. Descriptions of several new species of North American insects. Journ. Acad. Nat. Sci. 1:2. Philadelphia. pp. 19-23. (Only *Cicindela*, among the Carabidae.)

1818. A monograph of North American insects, of the genus *Cicindela*. Trans. Amer. Philos. Soc. (N. S.) 1. Philadelphia. pp. 401-426.

1823a. Descriptions of coleopterous insects collected in the late expedition to the Rocky Mountains, performed by order of Mr. Calhoun, Secretary of War, under the command of Major Long. Journ. Acad. Nat. Sci. 3:1. Philadelphia. pp. 139-216.

1823b.<sup>3</sup> Descriptions of insects of the families of Carabici and Hydrocanthari of Latreille, inhabiting North America. Trans. Amer. Philos. Soc. (N. S.) 2:1. Philadelphia. pp. 1-109.

1824. Appendix to the narrative of an expedition to the source of St. Peter's river, &c., under the command of Stephen H. Long, Major U. S. T. E. 2. Philadelphia. pp. 268-378.

1825. American entomology. II. Philadelphia. Pls. 19-36.

1828. American entomology. III. Philadelphia. Pls. 37-54.

1834.<sup>4</sup> Descriptions of new North American insects and observa-

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<sup>3</sup>The year of publication of this important paper is much discussed. It is often given as 1825 (e. g. by Hagen 1862-63; Leng 1929; Horn & Schenckling 1928-29), but Leconte (1859b, p. 435) is obviously right in assuming the year to be 1823. This, among other things, gives certain Say names priority over names given by Germar (1824), as expressly stated by Say himself (1834, p. 421, *Anchomenus cincticollis*).

<sup>4</sup>Part of Say's paper of 1834 had been printed in 1829-33 in a newspaper, "The Disseminator," and another part as a separate pamphlet, both at New Harmony, Ind. (see Leconte 1859b, p. 521). Neither can be regarded as valid publication.

tions on some already described. Trans. Amer. Philos. Soc. 4. Philadelphia. pp. 409-470.

In the present paper we have treated only the true ground-beetles. The 16 Say species of tiger beetles (subfam. *Cicindelinae*) are omitted and also 12 species described from Mexico. The remaining specific names given by Say among the Carabidae are 147 in number. Leng (1920) gives the same figure, but two of his names (*Calosoma indistinctum*, *Harpalus iricolor*), listed as synonyms, are *nomina nuda*. On the other hand, *Calathus gregarius*, in Leng, was attributed to Dejean instead of to Say, and *Harpalus similis* (*Anisotarsus s.*) was omitted.

Of the two authors of the present paper, R. Freitag is responsible for the 5 species belonging to genus (or subgenus) *Evarthrus* among the Pterostichini, whereas C. H. Lindroth studied the remaining species with kind help, in some cases, from the following experts, who selected neotypes among their specialities:

Prof. R. T. Allen, University of Arkansas, Fayetteville, Ark.,  
*Loxandrus rectus*.

Mr. T. L. Erwin, University of Alberta, Edmonta, Alta., *Brachinus cyanipennis* and *B. stygicornis*.

Mr. T. F. Hlavac, Harvard University, Cambridge, Massachusetts, *Clivina pallida*.

Say's descriptions were usually good, sometimes excellent for his time. Nevertheless, many of them, notably of course in critical genera, cannot be reliably interpreted. Unfortunately, Say's private collection was entirely destroyed after his death (Leconte 1859a, p. VI; Ord 1859, p. XIX, footnote), and a comparison with authentic Say specimens is therefore excluded (but see below). For the correctness of the present applications of his names, we are indebted primarily to John L. Leconte who, in 1859, edited "The Complete Writings of Thomas Say," with comments as to the right interpretation and taxonomic position of most Say species of Coleoptera. The Leconte Collection, in the Museum of Comparative Zoology (MCZ), Cambridge, Mass., provides a complete picture of how the Say species were interpreted by him.

In order to stabilize future use of specific names given by Say, it is highly desirable to designate type specimens. The aim of the present paper is to do so, as far as ground-beetles are concerned. It might seem, considering the total destruction of the Say Collection (see above), that a selection of neotypes would be the only solution. However, it so happened that Say distributed specimens from his own collection to at least one of his contemporaries abroad, Count

P. F. M. A. Dejean, in France. This is apparent from Dejean's famous work, "Spécies Général des Coléoptères" (Vols. I-V, 1825-31). When he wrote the first volume (1825), Dejean had not acquired contact with Say, but in the preface to Vol. 2 (1826, p. VIII) he acknowledges, in a general way, having received many Say specimens. In this, as well as in the later volumes of his work, when re-describing certain Say species, Dejean mentions that Say had sent him specimens. This is the case for the species listed in Table 1. Under many other species names, here omitted, Dejean quotes Say as the author but without mentioning specimens received from him.

One of my assistants, Mr. Reinhold Charpentier, when visiting the Muséum National d'Histoire Naturelle in Paris (MNP) in 1967, kindly undertook to study the Oberthür Collection, which includes the Dejean Collection, to search for genuine Say specimens. Dejean specimens are easily recognized by their bright green labels (see Lind-

Table 1. Say species mentioned by Dejean in "Spécies Général des Coléoptères," Parts II-V, as received from Say (modern generic names used). An \* = with Say's name on the specimen.

Species	Say description	Dejean reference
<i>Agonum decentis</i>	1823b: 53	III.1828:107
<i>Amara impuncticollis</i>	1823b: 36	III.1828:466
* <i>A. musculus</i>	1823b: 35	III.1828:478
* <i>Anisodactylus agricola</i>	1823b: 33	IV.1829:151
<i>A. baltimorensis</i>	1823b: 33	IV.1829:154
* <i>A. caenus</i>	1823b: 34	IV.1829:159
<i>A. rusticus</i>	1823b: 32	IV.1829:157
* <i>Anisotarsus terminatus</i>	1823b: 48	IV.1829:356
* <i>Bembidion contractum</i>	1823b: 85	V.1831:124
* <i>B. dorsale</i>	1823b: 84	V.1831: 72
* <i>B. levigatum</i>	1823b: 84	V.1831:151
<i>Calosoma luxatum</i>	1823a:149	II.1826:197
* <i>Carabus sylvosus</i>	1823b: 75	II.1826:152
* <i>Chlaenius emarginatus</i>	1823b: 63	II.1826:367
<i>Dyschirius globulosus</i>	1823b: 23	II.1826:480
<i>D. pallipennis</i>	1823b: 24	II.1826:481
<i>D. sphaericollis</i>	1823b: 23	II.1826:480
<i>Harpalus erraticus</i>	1823b: 27	IV.1829:258
* <i>H. faunus</i>	1823b: 28	IV.1829:254
* <i>Lebia tricolor</i>	1823b: 11	II.1826:454
<i>Olisthopus parmatum</i>	1823b: 49	III.1828:182
* <i>Pasimachus subsulcatus</i>	1823b: 19	II.1826:471
<i>Scaphinotus bilobus</i>	1823b: 73	II.1826: 17
* <i>Stenolophus ochropezus</i>	1823b: 54	IV.1829:424
<i>Synuchus impunctatus</i>	1823b: 45	III.1828:469
<i>Tachys flavicauda</i>	1823b: 87	V.1831: 54
<i>T. inornatus</i>	1823b: 87	V.1831: 53

roth 1955a), and in some cases the pin bears a small additional square of the same color with "Say" or "D. Say" in Dejean's hand, or this note is added on the first label, implying that Say's name was written there twice. These specimens, belonging to species marked with an asterisk (\*) in Table 1, must be accepted as authentic Say specimens and are available for selection as lectotypes. Mr. Charpentier was able to find representatives of 9 such species. Afterwards, Mr. A. Descarpentries, of the Paris Museum, was kind enough to make a complementary search for Say specimens in the Oberthür collection, and the rediscovery of three of the species (*Chlaenius emarginatus*, *Pasimachus subsulcatus*, *Stenolophus ochropesus*) was due to his efforts. For reasons mentioned below under each species, lectotypes were *not* selected for the following Say species represented in the Dejean collection: *Anisodactylus agricola*, *Bembidion contractum*, *B. dorsale*, *Harpalus faunus*.

Article 75 of the International Code of Zoological Nomenclature sets the following limitations and conditions for designating neotypes. They are to be designated only if no holo-, lecto-, or syntypes exist: this condition is satisfied in the present case by information given in preceding paragraphs. They are to be designated only in connection with revisory work: present designations are connected with the senior author's revisory work on the ground-beetles of Canada and Alaska (Lindroth 1961-1968), which includes almost all species of northern United States too. They are to be designated only in "exceptional circumstances," in the interests of stability of nomenclature: for reasons given in preceding paragraphs, neotypes are considered necessary to stabilize use of Say's names. Characters regarded as differentiating the taxa for which neotypes are designated are given in bibliographic references in square brackets; the reference is usually to Lth 1961-1968. Evidences are given for believing that the neotypes are consistent with what is known of the original type material (according to the descriptions and with reference to localities). And the neotypes have been marked as such for recognition, and are the property of the Museum of Comparative Zoology. The proposal to designate neotypes for Say's Carabidae is known to and approved by several of the most active specialists in North America.

#### ENUMERATION OF SPECIES<sup>5</sup>

In the following pages, all Say names given to North American Carabidae other than Cicindelinae are treated under Say's original

<sup>5</sup>*Aretharea helluonis* Say (1834, p. 411) is evidently an artifact (see Lec. 1859b, p. 524; Chd. 1871, p. 287). It is omitted from the present list.

genus names but in the order of Leng's Catalogue (1920), the Leng number being given in each case.

Of 8 species, *lectotypes* (in the Paris Museum, MNP) are designated; of the remaining species, *neotypes* are designated and deposited in the Museum of Comparative Zoology (MCZ). Exceptions are 2 *nomina nuda* (names without descriptions) and 7 *nomina dubia* (names not interpretable).

In the majority of cases, a specimen in the Leconte Collection (MCZ) could have been chosen as neotype. We have, however, avoided doing this for two reasons: (1) it seemed more convenient to keep all the Say neotypes together, as a separate collection, and (2) it seemed important to designate a type locality if possible, or at least a restricted type area, and to select specimens with appropriate locality labels. Such specimens are seldom available in the Leconte Collection. This has allowed us to select specimens from as close as possible to the parts of the country from which Say's specimens came, when he gives this information.

For one species, *Patrobis longicornis*, a neotype has been selected by Darlington, 1938 (MCZ), and type localities or type areas have been designated by Lindroth (1961, 1963, 1966, 1968) for many other Say species.

134<sup>6</sup> *Cychnus bilobus* (1823b: 73). Type area "Missouri" or "North-Western Territory." Say's description and the later colored plate (1828: XLV: 3) do not permit a reliable separation from allied species, *cavicollis* Lec. and *fissicollis* Lec. The provenience "Missouri" (acc. to Schwarz, 1895, p. 270, probably = N Nebraska) suggests *fissicollis*, represented from Kansas and Missouri in the MCZ. "North-Western Territory," however (acc. to Schwarz, l.c.), is probably Minnesota. This is herewith designated as type area. As *neotype* I have selected a ♂ from a locality as close to Minnesota as possible: Nipigon, W. Ont. — *Scaphinotus (Nomaretus) bilobus* [Lth. 1961, p. 19].

170 *Carabus sylvosus* (1823b: 75). No type area given. Designated type loc.: Asheville, N. C. (Lth., 1961, p. 41). The interpretation of Say's name is clear from his description of the dilated palpi and the elytral sculpture. The species is geographically uniform, except in the south (see Van Dyke, 1945). In MNP is a Dejean ♂ with two of the usual green labels: (a) "sylvosus Say"; (b) "D. Say." It agrees with the present concept of the species and

<sup>6</sup>The number preceding each name is the number assigned in the Leng (1920) list.

I have designated it as *lectotype*. — *Carabus sylvosus* [Lth. 1961, p. 41].

171 *Carabus serratus* (1823b: 77). No type area given. Asheville, N. C., designated as type loc. (Lth. 1961, p. 40). The interpretation of Say's name is clear from his description of the serrate elytral margin, from which his name was derived. A ♂ from the type loc. designated as *neotype*. — *Carabus serratus* [Lth. 1961, p. 40].

172 *Carabus limbatus* (1823b: 77). Type area Maryland. The application of Say's name is clear from his description of the elytral sculpture. The species has no tendency of geographical variation. A ♂ from Charles Co., Md., designated as *neotype* and the place as type loc. — *Carabus limbatus* [Lth. 1961, p. 35].

173 (syn.) *Carabus interruptus* (1823b: 62). No type area given. The interpretation is clear from the description of the elytral sculpture, and the synonymization with *vinctus* Weber (1801) was accepted by Say himself (1834, p. 416). A ♂ from Germantown, Penn., designated as *neotype* and the place as type loc. — *Carabus vinctus* Web. [Lth. 1961, p. 34].

176 *Carabus externus* (1823a: 150). Type area "Arkansa." Say's description of the form of prothorax and of the elytral sculpture seems sufficient for an identification. A ♀ from Little Rock, Ark., designated as *neotype* and the place as type loc. — *Calosoma externum* [Lth. 1961, p. 49].

200 *Calosoma obsoleta* (1823a: 149). Type area "Arkansa" and "near the Rocky Mountains"; apparently the Arkansas River is meant. Say's description of the sculpture and the bluish foveolae of the elytra seems to exclude other species. A ♀ from Fort Reynolds, Colo., designated as *neotype* and the place as type loc. — *Calosoma obsoletum* [Lth. 1961, p. 49].

200 (syn.) *Calosoma indistinctum*. This is a *nomen nudum*, apparently never described by Say (in spite of the quotation "1825: 151" in Leng, 1920). It was mentioned by Lec. (1845, p. 208) as being the same as *luxatum* Dej. (1826, p. 126; *nec* Say), that is *obsoletum* Say.

219 *Calosoma luxata* (1823a: 149). Type area "Arkansa," no doubt in the same sense as for *C. obsoleta*, described in the same paper. The *luxatum* group of *Calosoma* (*Callisthenes*) is extremely difficult and it is important to fix the properties of the true *luxatum* Say. The original patria, "Arkansa," no doubt aims at the upper parts of the Arkansas River, that is, in Colorado. According to the revision of Mrs. Gidaspow (1959, map, fig. 11, p. 312), only what

she regards as the true *luxatum* has been found in Colorado. A ♂ labeled "Douglas Spring, Routt Co., Colo." (coll. Fall) has been selected as *neotype* and the place as type loc. [Lth. 1961, p. 54].

Description of ♂ *neotype*. — *Chaetotaxy*. Head: 2 fix-points (setae broken) each side inside hind-margin of eye. Prothorax: all setae broken but, judging from fix-point, there have been, on each side, only 1 at hind-angle and 1 at middle laterally. (On the high variability of this character, see Lth., 1961, p. 55.) — Form of *prothorax* approximately as in Gidaspow's fig. 55; but greatest width clearly before middle and sides faintly sinuate in basal half. — *Elytra* with strong sculpture, striae regular in frontal half, tegulae subquadrate, almost flat near the suture anteriorly, becoming rounded and very convex (granulate) laterally and apically. — ♂: also 1. pro-tarsal segment with well-developed brush (as described by Gidaspow, p. 313, for a sample from Colo.). Penis apex as in a ♂ from Utah, figured by Gidaspow (fig. 166). — *Calosoma luxatum* [Lth. 1961, p. 54].

228 *Elaphrus fuliginosus* (1834: 417). Type area Pennsylvania. Say's description was based on a specimen with head and prothorax mutilated; he therefore used only elytral characters when comparing it with the European *uliginosus* F. Leconte first (1859b, p. 530) suggested identity with *cicatricosus* Lec. but in his collection (MCZ) applied the name as now unanimously used (apparently following Crotch, in Horn, 1876). Though Say's description cannot be interpreted, this practice should be retained. No specimen from Penn. could be found. A ♂, Rumney, N. H., designated as *neotype*. — *Elaphrus fuliginosus* [Lth., 1961, p. 114].

233 *Elaphrus ruscarius* (1834: 417). Type area Pennsylvania, named in the first place and designated by Lth. (1961, p. 119). The identity of Say's species seems clear from his comparison with European specimens of *riparius* L. A ♂ from Columbia, Penn., designated as *neotype* and the place as type loc. — *Elaphrus ruscarius* [Lth. 1961, p. 119].

246 (syn.) *Notiophilus porrectus* (1834: 418). No type area given. The description of the form of prothorax and the pale color of the legs confirms the view introduced by Lec. (1863) that this is a synonym of *aeneus* Hbst. (1806). A ♂ from Pennsylvania designated as *neotype* and this state as type area. — *Notiophilus aeneus* Hbst. [Lth. 1961, p. 93].

247 *Notiophilus semistriatus* (1823b: 81). No type area given. Marquette, Mich., was designated by Lth. (1961, p. 94) but, since this specimen could not be rediscovered at the MCZ, a new type

loc. is proposed below. — Say's description cannot be interpreted. His *forma typica* (n nominate form), because it has "feet black," is more likely to be referred to *aquaticus* L., whereas his "Var.  $\alpha$ ," with "tibiae piceous," may be *semistriatus* auct. The "Var.  $\beta$ " of 1823 was later (1834) by Say separated as distinct under the name of *porrectus* (= *aeneus* Hbst.). Say's concept of *semistriatus* was thus composite and, though Lec. (e. g. 1848, p. 450) confused it with his *novemstriatus*, it seems permissible to retain the name as generally used in this century, that is, for the species with a single preapical elytral puncture and pale tibiae. Fall (1906, pp. 79, 84) reports that F. Blanchard saw "undoubtedly authentic exponents of Say's *semistriatus*" in the collections of Harris, Melsheimer and Ziegler, and that these agreed with the present concept of the species' name. — A ♂ from Fairfax, Va., with genital slide, was designated as *neotype* and this place as new type loc. (see above). — *Notiophilus semistriatus* [Lth. 1961, p. 94].

292 *Nebria pallipes* (1823b: 78). No type area given; Boston, Mass., designated as type loc. by Lth. (1961, p. 76). Say mentions the two pale frontal spots and the interpretation of his name is therefore certain. A ♂ from Monterey, Mass., designated as *neotype*. — *Nebria pallipes* [Lth. 1961, p. 76].

305 *Pasimachus subsulcatus* (1823b: 19). Type areas "Georgia and Florida." Dej. (1826, p. 471) mentions that he has received this species from Say and in MNP is a specimen (sex not determined) with one of the characteristic green Dej. labels: "subsulcatus Say, in Amer. bor. — D. Say." It agrees with Say's description, except that the "obsolete rudiments of punctures" on the elytra are virtually absent. I have designated this specimen as *lectotype*. The species is unusually variable, as described by Leng (1915, p. 566) and Bänninger (1950, pp. 495, 502). The lectotype belongs to what the latter author regards as the typical form: the inner elytral intervals are clearly indicated, nrs. 3 & 5 broader and more convex. It agrees fairly well with ex. nr. 4 in coll. Lec., whereas his exx. nrs. 1-3 belong to what Bänninger (l.c., p. 495), with some doubt, regards as sbsp. *subnitens* Csy. The lectotype also agrees with 1 ex., Sanford, Fla. (MCZ), except that, in this, the costae and punctures of elytra are better developed. Florida is herewith designated as type area. — *Pasimachus subsulcatus* [Bänninger 1950, pp. 495, 502].

331 *Clivina globulosa* (1823b: 23). No type area given. It is a *Dyschirius* belonging to a very difficult group and Say's description cannot be interpreted. The name is here applied to the commonest and most widespread member of the group, as described by Lth. (1961,

p. 154). A macropterous ♀ from Arlington, Mass., herewith designated as *neotype* and the place as type loc. ("Boston area" already designated by Lth., l.c.). — *Dyschirius globulosus* [Lth. 1961, p. 154].

339 *Clivina sphaericollis* (1823b: 23). No type area given; Rumney, N. H., designated as type loc. by Lth. (1961, p. 145). Say's description cannot be interpreted. His name is used here according to general practice, as expressed in coll. Lec. (MCZ). A ♀ from Rumney, N. H. designated as *neotype*. — *Dyschirius sphaericollis* [Lth. 1961, p. 145].

346 *Clivina pallipennis* (1823b: 24). Type loc. Egg Harbour, N. J., herewith designated; also Virginia & Florida mentioned. Though Say's description does not exclude *sellatus* Lec., it seems permissible to use his name according to general practice, that is, for the species without dorsal puncture on the elytra. A ♂ from Anglesea, N. J., designated as *neotype*. — *Dyschirius pallipennis* [Lth. 1961, p. 142].

365 *Clivina pallida* (1823b: 22). Type loc. Chinquoteague Island, Va., "under yellow pine bark." Mr. T. F. Hlavac, who is revising this group of *Clivina*, has preserved Say's name for the species characterized by slender pro-tibiae with short lateral teeth, thus separated e. g. from *rubicunda* Lec. *C. rufescens* Dej. has been regarded as a probable synonym of *pallida* (Lec., 1859b, p. 452) and specimen nr. 1 in coll. Lec. (MCZ), labeled "C. rufescens Dej. ? pallida Say," belongs to *pallida* Say as defined by Hlavac. Since no authentic specimen of *rufescens* Dej. is present in the Paris Museum (Lth., 1955a, p. 13), a correct application of the name may be difficult. As *neotype*, Hlavac has designated a ♂ from South Carolina (coll. Liebeck). — *Clivina pallida* [as characterized above].

383 *Clivina lineolata* (1823b: 22). No type area given; Allegheny, Penn., designated as type loc. by Lth. (1961, p. 166). Say's description could as well be applied to *sulcifrons* Putz. (1846) which, by Lec. (1859b, p. 451) and also by Putzeys himself (1866, p. 223), was regarded a synonym (see Lth., l. c.). The interpretation here made is in accordance with that of the coll. Lec. (MCZ). A ♂ (with genitalia dissected) from Allegheny, Penn., designated as *neotype*. — *Schizogenius lineolatus* [Lth. 1961, p. 66].

395 *Clivina viridis* (1823b: 21). No type area given. It is almost certain that Say described *viridis* auct. He would hardly have overlooked the coarse punctures on the disc of prothorax in *puncticollis* Dej.; and the remaining three N. American species of *Ardistomis* have striate, not seriatly punctate elytra. A ♂ (genital slide made)

from Philadelphia Neck, Penn., designated as *neotype* and the place as type loc. — *Ardistomis viridis* [Lec. & Horn 1879, p. 32].

398 *Panagaeus crucigerus* (1823b: 69). Type loc. Senipuxten, Md. Say's description is conclusive. A ♂ from Surf City, N. J., designated as *neotype*. — *Panagaeus cruciger* [Lec. & Horn 1879, p. 59].

399 *Panagaeus fasciatus* (1823b: 70). No type area given. Say's description is conclusive. A ♂ from Pennsylvania designated as *neotype* and the state as type area. — *Panagaeus fasciatus* [Lec. & Horn 1879, p. 59].

408 *Bembidium inaequale* (1823a: 151). Type loc. Engineer, Missouri. Say's descriptions (also 1834, pp. 549-550) fit almost any species of subg. *Chrysobracteon* but the name has always been used as conceived by Lec., in his collection (MCZ). For geographical reasons, the typical subspecies, without lateral seta of prothorax and with strong elytral striae, must be concerned (description, see Lth., 1963, p. 234). The selected *neotype* is a true exponent of this: ♂, Mt. Pleasant, Iowa. — *Bembidium inaequale* [Lth., 1963, p. 233].

419 *Bembidium punctostriatum* (1823b: 83). No type area given; Rumney, N. H., designated as type loc. by Lth. (1963, p. 236). Say's descriptions (also 1834, p. 436) are insufficient for a recognition but the name has always been used for the largest species of subg. *Chrysobracteon*, for instance in coll. Lec. (MCZ). A ♂ from Rumney, N. H., designated as *neotype*. — *Bembidium punctostriatum* [Lth. 1963, p. 236].

419 (syn.) *Bembidium sigillare* (1834: 437). Type area given as "Missouri" (probably = Nebraska). This is a *nomen dubium* regarded, with doubt, as a synonym of *punctostriatum* Say by Lec. (1859b, p. 552). The name has not been used since and there is no reason to select a *neotype*.

429 *Bembidium coxendix* (1823a: 151). No type area given but taken during the "Rocky Mountain Expedition"; Fort Pierre, S. Dakota, designated as type loc. by Lth. (1963, p. 243). The original description gives no clue for an identification; but, since the pale variety of the species described in 1834 (p. 436) no doubt is identical with the closely related *confusum* Hayw. (*nitidulum* Dej.), the current interpretation of *coxendix* is most probably right. A ♂ from Fort Pierre, S. D., designated as *neotype*. — *Bembidium coxendix* [Lth. 1963, p. 243].

440 *Bembidium levigatum* (1823b: 84). Type area given as "Missouri" (probably = Nebraska). The description is almost conclusive though it is peculiar that Say failed to notice the erect elytral

pubescence, unique within the entire genus. There are 2 authentic ♀♀ in MNP: (1) with two green Dej. labels: (a) "laevigata Say, in Amer. bor.," (b) "D. Say"; and (2) with two green Dej. labels: (a) "♀," (b) "Say." I have designated ♀ nr. 1 as *lectotype*. A definite choice of type area (or locality) should be postponed until specimens from Nebraska are at hand. It is not necessary to change Say's original spelling into *laevigatum*. — *Bembidion levigatum* [Lth. 1963, p. 254].

512 *Bembidium niger* (1823b: 85). No type area given; Rumney, N. H., designated as type loc. by Lth. (1963, p. 301). The name is interpreted according to coll. Lec. (MCZ). One point confirming this in Say's descriptions (also 1834, p. 437) is the very coarsely punctate, apically obsolete elytral striae. A ♂ from Rumney, N. H., designated as *neotype*. — *Bembidium nigrum* [Lth. 1963, p. 301].

577 *Bembidium postremum* (1834: 437). Type area Pennsylvania. Lec. (1859b, p. 561) first regarded *postremum* as the same as *scopulinum* Kby., which is easily understood, considering that Say described his species as smaller than *tetracolum*. However, current practice, based on Lec., according to his collection, applies the name *postremum* to the large eastern representative of the *bimaculatum* group (Lth., 1963, p. 330). There is no reason for a change. A ♂ from Allegheny, Penn., has been designated as *neotype* and the place as type loc. — *Bembidium postremum* [Lth. 1963, p. 330].

588 *Bembidium tetracolum* (1823b: 89). No type area given; Arlington, Mass., designated as type loc. by Lth. (1963, p. 331). Say's descriptions (also 1834, p. 437) are not sufficient for specific recognition in this difficult group. I have followed Lec., according to his collection (MCZ). In N. America the species is an old introduction from Europe, where it was long, incorrectly (Lth., 1957, pp. 334-335), known as "*ustulatum* L." A ♂ from Arlington, Mass., designated as *neotype*. — *Bembidium tetracolum* [Lth. 1963, p. 331].

591 *Bembidium honestum* (1823b: 82). No type area given; Water Gap, N. J., designated as type loc. by Lth. (1963, p. 248). Say's description is not decisive but it is advisable to follow Lec.'s opinion, as expressed in his collection (MCZ) where his own *basale* (1848, p. 454) was placed as a synonym. But *antiquum* Dej., referred to as another synonym by Lec. (1859b, p. 498), belongs to *chalceum* Dej. (see Lth. 1963, p. 247). A ♂ from Water Gap, N. J., designated as *neotype*. — *Bembidium honestum* [Lth. 1963, p. 248].

658 *Bembidium dorsale* (1823b: 84). Type area given as "Missouri" (probably = Nebraska). In the MNP is a ♀ with the following green Dej. labels: (a) "dorsalis Say, in Amer. Bor."; (b) "Say." There is no doubt that this is an authentic Say specimen but, unfortunately, it belongs to *variegatum* Say, auct. Say (1823b, p. 89) regarded these two species as "very closely allied" and suggested that *dorsale* might be "a mere variety" of *variegatum*. A comparison between the two descriptions (see *variegatum*, below) demonstrates, however, that Say probably had two different species before him, the ones that today pass under his two names. It should therefore be concluded that the Paris specimen was misidentified by Say and it should not be used as lectotype. A ♀ labeled Missouri has been designated as *neotype*. It belongs to the species with straight frontal furrows and the microsculpture of the forebody shallow. A definite choice of type area (or locality) should be postponed until specimens from Nebraska are at hand.—*Bembidion dorsale* [Lth., 1963, p. 359].

660 *Bembidium variegatum* (1823b: 89). No type area given; Rivervale, N. J., designated as type loc. by Lth. (1963, p. 360). The name was long used for *intermedium* Kby. and related small species of subg. *Notaphus*. Csy. (1918, pp. 139-140) correctly re-established *variegatum* as the name for the species meanwhile renamed *postfasciatum* Ham. Say gives the same size (1/5 of an inch) for *variegatum* as for *dorsale*. In his rather complete description of the two species, three pairs of characters seem to indicate that the current interpretation of his names is correct:—

- | <i>dorsale</i> (pp. 84-85)  | <i>variegatum</i> (p. 89)   |
|---|---|
| (a) "thorax green slightly tinged with cupreous"  | "thorax blackish, slightly bronzed, tinged each side with green"                          |
| (b) "elytra whitish-testaceous—two fuscous, obsolete, undulated bands behind the middle, the posterior one less definite" | "elytra black variegated with testaceous, or testaceous varied with black dots and lines" |
| (c) (elytra with) "interstitial lines (= intervals) hardly convex"  | (elytra with) "interstitial lines convex"   |

A ♂ from Rivervale, N. J., designated as *neotype* of *variegatum*.—*Bembidion variegatum* [Lth. 1963, p. 360].

694 *Bembidium contractum* (1823b: 85). No type area given; Ipswich, Mass., designated as type loc. by Lth. (1963, p. 372). Say's description is quite insufficient for a species belonging to this ex-

ceedingly difficult group. In the Paris Museum is a ♀ with small green Dejean label, with "Say" only; although it stands under the label "*contractum*" in the drawer, its character of a true representative of what Say regarded as his *contractum* may perhaps be questioned. The specimen does *not* belong to *contractum* auct. (Lth. 1963, p. 372). The wings are full (in *contractum* apparently constantly reduced) and, above all, the hind-angles of its prothorax are very poorly developed, exactly as described for *vernacula* Csy. (1885). This was regarded as a sbsp. of *constrictum* Lec. by Casey 1918 (p. 124) but it is a doubtless distinct species. In view of the incomplete labeling of the Paris specimen and also of the considerable confusion that would be created by a removal of Say's name, I have refused to designate it as lectotype. A ♂ of the "true" *contractum* from Ipswich, Mass., has been designated as *neotype*. — *Bembidion contractum* [Lth. 1963, p. 372].

705 *Bembidium affine* (1823b: 86). No type area given; Mobile, Ala., designated as type loc. by Lth. (1963, p. 376). Say's description does not exclude members of the *versicolor* group but his name has always been used for the only species with frontal furrows doubled both in front and behind. It was later described by Dej. (1831) as *decipiens* and *fallax*. A ♂ from Mobile, Ala., designated as *neotype*. — *Bembidion affie* [Lth., 1963, p. 376].

737 (syn.) *Bembidium oppositum* (1823b: 86). No type area given; Rumney, N.H., designated as type loc. by Lth. (1963, p. 383). Say mentions the laterally oblique base of the prothorax and, in 1834 (p. 439), suggests that his species belongs in (subg.) *Lopha*; the interpretation, therefore, seems certain. Lec. (1859b, p. 501) declared *oppositum* as identical with *quadrinaculatum* L., but it is now regarded as a Nearctic subspecies of this (Lth., l. c.). A ♂ from Rumney, N. H., designated as *neotype*. — *Bembidion quadrinaculatum oppositum* [Lth. 1963, p. 383].

792 *Bembidium ephippiatum* (1834: 439). Type area Indiana. Say's description is conclusive. A ♂ from Indiana (coll. Fall) designated as *neotype*. — *Tachys (Pericompsus) ephippiatus* [Hayw. 1899, p. 214].

805 *Bembidium incurvum* (1834: 440). Type area Indiana. Though Say's description of the head as "blackish-piceous" points to *incurvus* auct. rather than to the closely allied *anceps* Lec., it is by no means decisive. I have followed Lec., acc. to his collection (MCZ). A ♂ from N. Illinois (coll. Fall) designated as *neotype*. — *Tachys incurvus* [Lth. 1966, p. 416].

829 *Bembidium tripunctatum* (1834: 439). Type area Indiana.

Besides the three-punctured base of prothorax, Say mentions the presence of five elytral striae, which makes his description almost decisive. A ♂ from New Jersey designated as *neotype*. — *Tachys tripunctatus* [Lth. 1966, p. 423].

849 *Bembidium proximus* (1823b: 88). No type area given; Brookline, Mass., designated as type loc. by Lth. (1966, p. 432). The description of the prothorax ("posterior angles rectangular") fits *rhodeanus* Csy. at least as well, and also *scitulus* Lec., but I prefer to follow current practice, as expressed in coll. Lec. (MCZ). A ♀ from Brookline, Mass., designated as *neotype*. — *Tachys proximus* [Lth. 1966, p. 432].

883 *Bembidium laevum* (1823b: 88). No type area given; Arlington, Mass., designated as type loc. by Lth. (1966, p. 426). The small size ("one-twentieth of an inch") and the presence of only one impressed elytral stria, mentioned by Say, make the interpretation almost decisive. A ♀ from Arlington, Mass., designated as *neotype*. — *Tachys laevus* [Lth. 1966, p. 426].

892 *Bembidium inornatum* (1823b: 87). No type area given; Asheville, N. C., designated as type loc. by Lth. (1966, p. 436). Say's name has been associated with the North American form of subg. *Tachyta* lacking a carina inside hind-angles of prothorax. Though Say does not mention this character, the procedure may be defensible. The taxonomic position of this form is much disputed: whether a separate species (Csy., 1918), a subspecies (Lth., olim), or a form of *nanus* Gyll. not deserving a name (Lth., l. c.). A ♂, without prothoracic carina, from Asheville, N. C., designated as *neotype*. — *Tachys nanus* Gyll. [Lth., 1966, p. 436].

898 *Bembidium flavicaudus* (1832b: 87). No type area given; White Sulphur Springs, W. V., designated as type loc. (Lth., 1966, p. 441). Say fails to mention the peculiar structure of the prothorax, but color characters as well as the reported occurrence under bark seem sufficient for an identification. A ♂ from White Sulphur Springs, W. V., designated as *neotype*. — *Tachys (Tachymenis) flavicauda* [Lth., 1966, p. 441].

901 *Feronia longicornis* (1832b: 40). No type area given; Arlington, Mass., designated as type loc. by Darlington (1938, p. 158) who labeled a ♂ from the same place as *neotype*. — *Patrobus longicornis* [Lth., 1961, p. 180].

929 *Abax coracinus* (1823b: 59). No type area given; Rockville, Penn., designated as type loc. by Lth. (1966, p. 444). The only character mentioned by Say pointing to *coracinus* auct. rather than to *cyanescens* Dej. (*foveatus* Lec.) refers to the elytral striae

being "minutely punctured"; in *cyanescens* they are virtually smooth. A ♂ from Rockeville, Penn., designated as *neotype*. — *Myas coracinus* [Lth., 1966, p. 445].

1006 *Feronia adoxa* (1823b: 46). No type area given; Mt. Wachusett, Mass., designated as type loc. by Lth. (1966, p. 467). Since Say does not mention the presence of any dorsal puncture on 3. elytral interval, as for related species of "*Feronia*" possessing it, the interpretation is almost certain. A ♂, agreeing with the type of *rejectus* Lec., from Mt. Wachusett, Mass., designated as *neotype*. — *Pterostichus adoxus* [Lth., 1966, p. 467].

1024 *Feronia honesta* (1823b: 51). No type area given; Rumney, N. H., designated as type loc. by Lth. (1966, p. 472). It is surprising that Say described the prothorax as "impunctured," which would rather suggest *blanchardi* Horn or *unicarum* Darl., from the southern Appalachians; but it seems defensible to retain Say's name for the only common and widespread species of the group, in accordance with coll. Lec. (MCZ). A ♂ from Rumney, N. H., designated as *neotype*. — *Pterostichus honestus* [Lth., 1966, p. 472].

1034 *Feronia constricta* (1823a: 147). Type loc. "Arkansa" River near the Rocky Mountains. Say's original description seems sufficient for an identification (R. F.). A ♂ from Colorado Springs, Colo., designated by R. Freitag as *neotype*. — *Evarthrus*<sup>7</sup> *constrictus* [Freitag, 1969, p. 158].

1044 *Feronia unicolor* (1823b: 40). No type area given. The species was interpreted from the original description and from the single specimen under this name in coll. Lec. (MCZ) (R. F.). A ♀ from Upson Co., Georgia, designated by R. Freitag as *neotype*. — *Evarthrus unicolor* [Freitag, 1969, p. 110].

1050 *Feronia heros* (1823a: 145). Type area "the Arkansa" (apparently the river). The species was interpreted from Say's original description (R. F.). A ♂ from Texas designated by R. Freitag as *neotype*. — *Evarthrus heros* [Freitag, 1969, p. 166].

1067 *Feronia sigillata* (1823b: 42). Type loc. Germantown, Penn. The name was interpreted from the original description, including type loc. (R. F.). A ♀ from Philadelphia, Penn., designated by R. Freitag as *neotype*. — *Evarthrus sigillatus* [Freitag, 1969, p. 133].

1080 *Feronia obsoleta* (1834: 424). Type area Indiana. The species was interpreted from Say's original description (R. F.). A

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<sup>7</sup>The senior author prefers to regard *Evarthrus* as a subgenus of *Pterostichus*.

♂ from Cades Cove, Blount, Tenn., designated by R. Freitag as *neotype*. — *Evarthrus obsoletus* [Freitag, 1969, p. 108].

1089 *Feronia stygica* (1823b: 41). No type area given; Rumney, N. H., designated as type loc. by Lth. (1966, p. 492). The expression "basal lines (i.e. basal foveae of prothorax) double" fits *stygius* auct. rather than *coracinus* Newm. The reported presence of only one dorsal puncture of elytra is against the situation in the entire *melanarius* group, where there are 2 (occasionally 3 or 4); it may be a case of *lapsus oculi*. A ♂ from Rumney, N. H., designated as *neotype*. — *Pterostichus stygius* [Lth., 1966, p. 492].

1100 *Feronia moesta* (1832b: 41). No type area given; Asheville, N. C., designated as type loc. by Lth. (1966, p. 496). Concerning the earlier confusion with *superciliosus* Say, see that species. The name *moestus* has always been used for the present species. A ♂ from Asheville, N. C., designated as *neotype*. — *Pterostichus moestus* [Lth., 1966, 496].

1101 *Feronia superciliosa* (1823a: 144). No type area given but collected during the "Expedition to the Rocky Mountains." From the description this species cannot be separated from *moestus* Say; and Lec., on several occasions (1852, 1859b, 1863), regarded them as conspecific. They are, however, kept apart under the two Say names in his collection, though only ex. nr. 1 of *superciliosus* (Virginia) is the present species, nrs. 2-4 being *moestus*. Actually, the two species are very different (Lth., 1966, p. 497). Say omitted mentioning the dorsal punctures of elytra in *superciliosus*, but their absence would have excluded also *ohionis* Cki. (*purpuratus* Lec.), the only other *Pterostichus* with "purplish" elytra that could be concerned. Say's description of the prothorax fits *superciliosus* auct. much better than *ohionis*. A ♂ from Pennsylvania (coll. Fall) designated as *neotype*. — *Pterostichus superciliosus* [Lth., 1966, p. 497].

1105 *Feronia permunda* (1834: 426). Type area Indiana (not "apparently Pennsylvania," as given by Lth., 1966, p. 535). Say's description fits *atratus* Newm. equally well (for descriptions see Lth., l. c.). The interpretation is made from ex. nr. 1 under "*permundus*" in coll. Lec. (MCZ). A ♂, with genitalia dissected, from "Richland & Lawrence Co.," Wabash, Ill., designated as *neotype*. — *Abacidae permundus* [Lth., 1966, p. 535].

1108 *Feronia ventralis* (1823b: 46). Type area "Missouri" (probably = Nebraska). Closely allied to *obscurus* Say (see below) but with elytral striae evidently punctate, as mentioned by Say. A ♂, agreeing with ex. nr. 1 in coll. Lec., from Douglas Co., Kansas,

designated as *neotype*. — *Pterostichus ventralis* [Lec. & Horn 1882, p. 24].

1110 *Feronia obscura* (1834: 425). Type area Indiana. The application of the name (against *ventralis* Say) seems clear from the description of the elytral striae: "not distinctly punctured, obsolete on the lateral submargin." A third species, *tumescens* Lec., has the hind-angles of prothorax much better developed. A ♂ (coll. Fall) agreeing with ex. nr. 1 in coll. Lec., from Allegheny, Penn., designated as *neotype*. — *Pterostichus obscurus* [Lec. & Horn 1882, p. 24].

1151a *Feronia submarginata* (1823b: 45). No type area given. The description is almost decisive. Whether *monedulus* Germ. (1824) is a pure synonym could not be decided. Since Say's description was published in 1823 (not 1825, as given in Leng), the name *submarginatus* Say under all circumstances has priority. A ♂ from Hope, Ark., designated as *neotype* and the place as type loc. — *Pterostichus submarginatus* [Lec. 1852, p. 246].

1161 *Feronia chalcites* (1823b: 56). No defined type area; Washington, D.C., designated as type loc. by Lth. (1966, p. 479). Say's description is not quite decisive and was interpreted according to coll. Lec. (MCZ). Say's name is older than the *chalcites* of Germar (1824; see under preceding species) and it was therefore not justified to substitute for it *sayi* Brullé (1835). A ♂ from Washington, D.C., designated as *neotype*. — *Pterostichus chalcites* [Lth., 1966, p. 479].

1162 *Feronia lucublanda* (1823b: 55). No type area given; Ithaca, N. Y., designated as type loc. by Lth. (1966, p. 482). Say's description of the depressed sides of the prothorax seems to fit this species only. A ♂ from Ithaca, N. Y., designated as *neotype*. — *Pterostichus lucublandus* [Lth., 1966, p. 482].

1162a *Poecilus fraternus* (1824: 270). Type area "North-west Territory" (probably Minnesota). The description is incomplete and cannot be interpreted. Lec. (1859a, p. 177) regarded *fraternus* as a "variety" of *lucublandus* Say but it seems wiser to treat it as a "*nomen dubium*" (Lth., 1966, p. 483) without designation of *neotype*.

1164 *Feronia convexicollis* (1823b: 50). Type area "Missouri" (probably = Nebraska). Say mentions that the sides of prothorax are depressed but also that they are "hardly contracted behind" whereas, in *lucublandus*, they are said to be "very little narrowed behind by a regularly curved edge." The status of *convexicollis* has been judged differently by different authors (see Lth., 1966, p. 483). In my opinion, it is not specifically distinct from *lucublandus* but may

well be treated as a subspecies confined to the interior. A ♂ from Devil's Lake, N. Dakota, has been designated as *neotype* and the place as type loc. — *Pterostichus lucublandus convexicollis* [Lth., 1966, p. 483].

1167 *Feronia tartarica* (1823b: 44). No type area given. The species belongs to a difficult group (subg. *Lophoglossus*) in need of revision. Say's description cannot be interpreted but the selected ♂ neotype agrees with Lec.'s description (1852) of the ♂ meso-tibiae and with the single ♂ (orange disc) in his collection. Casey's "*tartaricus*" (1913) is different, agreeing in said respect with *strenuus* Lec.; in *haldemani* Lec., the apical process of the ♂ meso-tibia is more acute. A ♂ from Mobile, Ala., designated as *neotype* and the place as type loc. — *Pterostichus tartaricus* [Lec. 1852, p. 249].

1174 *Feronia caudicalis* (1823b: 56). No type area given; Arlington, Mass., designated as type loc. by Lth. (1966, p. 500). Say's description is not decisive, but Lec. (1859b: 480) says that he has studied specimens sent by T. W. Harris who had compared them with "Say's type." A ♂ from Arlington, Mass., designated as *neotype*. — *Pterostichus caudicalis* [Lth., 1966, p. 500].

1178 *Feronia muta* (1823b: 44). No type area given; Black Mts., N. C., designated as type loc. by Lth. (1966, p. 489). Say's description is not quite decisive and I have followed Lec.'s interpretation according to his collection (MCZ). A ♂ from Black Mts., N. C., designated as *neotype*. — *Pterostichus mutus* [Lth. 1966, p. 489].

1190 *Feronia oblongonotata* (1834: 425). Type area "North West Territory" (probably Minnesota, possibly Manitoba). The name is still used for an independent species in Leng (1920). The description is apparently based on an immature specimen and would equally well apply to *pensylvanicus* Lec., which name, if so, it would replace. In order to avoid this it is justifiable to synonymize *oblongonotatus* with *adstrictus* Eschz. A ♂ from Aweme, Man., designated as *neotype*. — *Pterostichus adstrictus* Eschz. [Lth. 1966, p. 485].

1217 *Feronia recta* (1823b: 58). No type area given. The neotype agrees with Casey's description (1918, p. 381) and also, except that it is larger, with the 7. ex. in coll. Lec. (MCZ). A ♂, with genitalia dissected, from South Carolina, designated by R. T. Allen as *neotype* and the state as type area. — *Loxandrus rectus* [Lec. & Horn 1879, p. 51].

1262 *Zabrus avidus* (1823a: 148). Type area not given but collected during the Rocky Mountain Expedition; N. Fork S. Platte Canyon, Colo., designated as type loc. by Lth. (1968). The descrip-

tion is by no means conclusive but the name should be used according to general practice, as expressed in coll. Lec. (MCZ). A ♂ from N. Fork S. Platte Canyon, Colo., designated as *neotype*. — *Amara avida* [Lth. 1968, p. 689].

1265 (syn.) *Amara furtiva* (1834: 429). Type area Indiana. As stated by Hayward (1908, p. 40), Say's description was apparently based upon immature specimens. Except for the color, all characters mentioned fit the species previously described by Dejean (1828, p. 509) as *exarata*, of which *furtiva* has always been regarded as a synonym. A ♂ from Wabash Valley, Richland & Lawrence Co., Ill., designated as *neotype*. — *Amara exarata* Dej. [Lth. 1968, p. 680].

1281 *Feronia obesa* (1823b: 37). Type loc. Harrowgate, Penn. Say's description is not conclusive but the name has always been used in its present sense, that is, for the only widespread species of subg. *Percosia*. As neotype I have selected a pronounced representative of the eastern form (against *diffinis* Lec.; see Lth., 1968). A ♂ from Charity Island, Mich., designated as *neotype*. — *Amara obesa* [Lth., 1968, p. 690].

1372 *Feronia musculus* (1823b: 35). Type area, coast of Virginia. Say's description, though not conclusive, fits "*musculus*" auct. In the Paris Museum is a ♂ of this species carrying four green Dejean labels: (a) "♂"; (b) "*musculus* Say, in Amer. bor."; (c) "D. Say"; (d) "*Harpalus proletarius* Melsh. St." The latter is a manuscript name never published but listed in Dej.'s Catalogues of 1833 and 1836. The Paris ♂ has been designated as *lectotype*. There is no reason to change Say's original spelling into "*musculus*." — *Amara musculus* [Lth., 1968, p. 706].

1385 *Feronia impuncticollis* (1823b: 36). Type area Penn., named in the first place, herewith designated. Say's description cannot be interpreted. Since the basal pore-puncture of the elytra is not mentioned, it fits not only *littoralis* Mnh. but several other members of subg. *Amara* s. str., with pale antennal base. *A. impuncticollis*, as here conceived, and *littoralis* have been generally confused (for separating characters, see Lth., 1968, p. 730), as by Lec. and by Hayward (1908). The first specimens both in coll. Lec. and in coll. Hayward (MCZ) belong, however, to the present species and, since it is more southern in distribution, it is likely that Say's specimens from Penn. belonged to the same species. A ♂ from N. Cumberland, Penn. (coll. Fall), designated as *neotype* and the place as type loc. — *Amara impuncticollis* [Lth., 1968, p. 728].

1429 *Feronia basillaris* (1823b: 35). No type area given; Dover, Mass., designated as type loc. by Lth. (1968). The description,

notably of the punctuation of prothorax and elytral striae, is conclusive. A ♂ from Dover, Mass., designated as *neotype*. — *Amara basillaris* [Lth., 1968, p. 735].

1433 *Feronia angustata* (1823b: 36). Type area "on the Missouri." Since Say had not observed the trifold pro-tibial spure, there is no character mentioned in the description that would not fit *familiaris* Dft. as well. It may be justified, in spite of this, to refer his name to that species of subg. *Zezea* (*Triaena*) for which it has always been used. The description of the form of prothorax seems to exclude *pallipes* Kby. A ♀ from Independence, Iowa, designated as *neotype*. — *Amara angustata* [Lth., 1968, p. 736].

1450 *Dicaelus dilatatus* (1823b: 68). No type area given in the original description but reported as Pennsylvania in Say's paper of 1825 (Pl. XXIV: 3). Neither Say's descriptions nor his figure are decisive but the name has always been used for the species defined in detail by G. E. Ball, in his monograph (1959, p. 126). A ♂ from Camp Hills, Penn., designated as *neotype* and the place as type loc. — *Dicaelus dilatatus* [Ball 1959, p. 126].

1458 *Dicaelus sculptilis* (1823b: 68). Type area "Missouri" (possibly including Nebraska). An interpretation of Say's name, on the specific level, is clear from his descriptions and the figure (1825, Pl. XXIV: 4). The species consists of three subspecies of which the nominate one was fixed by Ball (1959, p. 142) as occurring in Arkansas, Missouri, Kansas, and Oklahoma; the *neotype* was identified by him as belonging to this subspecies: ♂ from Platte Co., Missouri, designated by me; at the same time designated type loc. — *Dicaelus sculptilis sculptilis* [Ball 1959, p. 141].

1452 *Dicaelus splendidus* (1823b: 68). Type area "from the Missouri" (apparently the river). Say's descriptions (also 1825) and illustration (1825, Pl. XXIV: 1) of color are conclusive. According to Ball (1959, p. 156) there are no other constant characters than the color of the elytra separating *splendidus* from *purpuratus* Bonelli (1813), of which he regards it as a subspecies. A ♀ from Platte Co., Missouri, designated as *neotype*, and the place as type loc. — *Dicaelus purpuratus splendidus* [Ball 1959, p. 156].

1482 *Feronia gregaria* (1823b: 47) (by mistake, the species name was attributed to Dejean in Leng, 1920). No type area given; Philadelphia, Penn., designated as type loc. by Lth. (1966, p. 543). Say's description applies equally well to *ingratus* Dej. but was interpreted in accordance with coll. Lec. (MCZ). A ♀ from Philadelphia, Penn., designated as *neotype*. — *Calathus gregarius* [Lth., 1966, p. 543].

1489 *Feronia impunctata* (1823b: 45). Type loc. Germantown, Penn. Say's description seems sufficient for an identification. It is very puzzling that Dejean (1828, p. 469), from 1 ex. sent by Say, regarded *Feronia impunctata* as a synonym of *Amara familiaris* Dft. This cannot be a *lapsus calami* for *Feronia impuncticollis* (see above) because the latter was by Dejean (l. c., p. 464) synonymized with *Amara trivialis* Gyll. (= *aenea* DeG.). A ♂ from Tyngsboro, Mass., designated as *neotype*. — *Synuchus impunctatus* [Lth., 1966, p. 551].

1507 *Feronia hypolithos* (1823b: 59). No type area given; Cleveland, Ohio, designated as type loc. by Lth. (1966, p. 645). Only size and the expression "striae — irregularly punctured" suggest *hypolithos* auct., which was otherwise interpreted from coll. Lec. (MCZ). A ♂ from Cleveland, Ohio, designated as *neotype*. — *Agonum hypolithos* [Lth., 1966, p. 645].

1513 *Feronia decentis* (1823b: 53). No type area given; Marion, Mass., designated as type loc. by Lth. (1966, p. 636). Say's description of the prothorax makes it almost certain that he had the "true" *decentis* before him; the pronounced sinuation of sides in front of the denticulate hind-angles, in *sinuatum* Dej., could hardly have remained unnoticed by Say. Therefore, a pronounced *decentis s. str.* (a ♀) has been selected as *neotype*. — *Agonum decentis* [Lth., 1966, p. 636].

1518 *Feronia cincticollis* (1823b: 52). No type area given; Philadelphia, Penn., designated as type loc. by Lth. (1966, p. 640). Say's description is insufficient. His name has been interpreted according to coll. Lec. (MCZ). A ♂ from Philadelphia, Penn., designated as *neotype*. — *Agonum cincticolle* [Lth., 1966, p. 640].

1518 (? syn.) *Feronia maculifrons* (1823a: 146). Type area "Arkansa Territory." The description cannot be interpreted and the name has never been used (see Lec., 1854, pp. 43, 59; 1859a, p. 94). It should be treated as a *nomen dubium* (Lth., 1966, p. 640) and no *neotype* selected.

1522 *Feronia extensicollis* (1823b: 54). No type area given; Rumney, N. H., designated as type loc. by Lth. (1966, p. 625). That Say's description refers to *extensicolle* auct. can hardly be doubted. However, since this species shows considerable geographical variation (Lth., 1966, pp. 625-627) and because Say did not mention the provenience of his specimens, it is of special importance to select a type area. Lec. (1854, p. 46) regarded the eastern, Casey (1920, p. 57) the western form as the true *extensicolle*. Say's material was probably from Pennsylvania, and it is therefore advisable to follow Lec.'s opinion. A pronouncedly "eastern" specimen was designated

as *neotype*: a ♀ from Rumney, N. H. — *Agonum extensicolle* s. str. [Lth., 1966, p. 625].

1523 *Feronia decora* (1823b: 53). No type area given; Arlington, Mass., designated as type loc. by Lth. (1966, p. 629). Say's description fits both *decorum* auct. and *thoracicum* Dej., but the latter, more southern species was probably not available to him. A ♂ from Arlington, Mass., designated as *neotype*. — *Agonum decorum* [Lth., 1966, p. 629].

1537 *Feronia errans* (1823a: 147). Type area not given but collected during the "Rocky Mountain Expedition"; Buena Vista, Colo., designated as type loc. by Lth. (1966, p. 616). Say's description, notably of color characters, is almost decisive. A ♀ from Buena Vista, Colo., designated as *neotype*. — *Agonum errans* [Lth. 1966, p. 616].

1540 *Anchomenus collaris* (1834: 421). Type area Indiana. There are several details in Say's description contradicting the current interpretation of his name: (a) the size is too large (7/20 of an inch, i.e. the same as given for *placidum*); (b) "body black," no mention made of the pale margins of prothorax; (c) "base of the first joint of the antennae — black-piceous," actually the entire 1. segment is rufous; (d) the prothorax is described as "subquadrate," with posterior angles "very obtuse" and basal foveae "slightly rugous"; actually the prothorax is almost circular, with obliterated hind-angles and smooth foveae. The entire description fits *melanarium* Dej. much better. In spite of this, in the interest of stability, I have followed Lec.'s interpretation, according to his collection (MCZ). A ♂ from Woodbury, N. J., designated as *neotype*. — *Agonum collare* [Lth., 1966, p. 612].

1542 (? syn) *Feronia scutellaris* (1823a: 146). No type area given but collected during the "Rocky Mountain Expedition." The description is quite uninterpretable and, though Lec. (1879, p. 56) referred it to *Agonum melanarium* Dej. (1828), before which it would then have priority, it is better to treat *scutellare* as a *nomen dubium*. No *neotype* should be selected.

1553 *Feronia cupripennis* (1823b: 50). No type area given; W. Roxbury, Mass., designated as type loc. by Lth. (1966, p. 591). Say's description of the color pattern is sufficient for an identification. A ♀ from W. Roxbury, Mass., designated as *neotype*. — *Agonum cupripenne* [Lth. 1966, p. 591].

1558 *Feronia nutans* (1823b: 52). Say's information "bought in New York" is of course no base for fixation of type loc.; Philadelphia Neck, Penn., designated as such by Lth., (1966, p. 617). The

description, notably of the color of body and legs, as well as of the impunctate elytral striae, is almost decisive. A ♂ from Philadelphia Neck, Penn., designated as *neotype*.—*Agonum nutans* [Lth., 1966, p. 617].

1567 *Feronia placida* (1823b: 43). No type area given; Dorchester, Mass., designated as type loc. by Lth., (1966, p. 613). Say's description is by no means decisive but I have followed Lec., according to his collection (MCZ). A ♀ from Dorchester, Mass., designated as *neotype*.—*Agonum placidum* [Lth., 1966, p. 613].

1573 *Feronia obsoleta* (1823b: 57). No type area given. Lth. (1966, p. 565) designated Michipicoten, L. Superior, Ont., as type loc. but, since afterwards no specimen so labeled could be rediscovered at the MCZ, I propose to change the type loc., as below. Say's description cannot be interpreted, but Lec. (1854, p. 57) saw a specimen named by the author, and his concept, according to coll. Lec. (MCZ), should therefore be followed. By many students, including Leng (1920) and, previously, myself (1955b), *obsoletum* Say has been treated as a synonym of *Agonum bogemani* Gyll. It is, however, distinct (Lth., 1966, p. 565 a.f.). A ♂ from Bayfield, Wisc., designated as *neotype*, and the place as type loc.—*Agonum obsoletum* [Lth., 1966, p. 565].

1578 *Feronia limbata* (1823b: 49). No type area given. The interpretation is clear from Say's description. Fall (1933) has shown that *Carabus pallipes* F. (1787, p. 202) is the same species and Say's name therefore falls into synonymy. A ♂ from Camden, S. C., designated as *neotype*, and the place as type loc.—*Agonum pallipes* F. [Lth., 1966, p. 620].

1581 *Feronia punctiformis* (1823b: 58). No type area given; Philadelphia Neck, Penn., designated as type loc. by Lth. (1966, p. 622). Say's description cannot be interpreted but I have followed Lec., according to his collection (MCZ). A ♂ from Philadelphia Neck, Penn., designated as *neotype*.—*Agonum punctiforme* [Lth., 1966, p. 622].

1595 *Feronia parmata* (1823b: 49). No type area given; Wissahickon Creek, Penn., designated as type loc. by Lth. (1966, p. 553). Say's description is not decisive; I have followed Lec., according to his collection (MCZ). A ♀ from Wissahickon Creek, Penn., designated as *neotype*.—*Olisthopus parmatus* [Lth. 1966, p. 553].

1595 (syn.) *Olisthopus cinctus* (1834: 424). Type area Pennsylvania. The descriptions of both *parmatus* (1823b) and *cinctus* (1834) are uninterpretable and, to a great extent, incommensurable, containing different kinds of characters. The elytra of *cinctus* are

described as unicolorous ("dull reddish-brown") but, since the size is given as virtually the same as for *parvatus* ( $3/10$  and less than  $3/10$  of an inch, respectively), the name *cinctus* cannot be referred to any of the small species of the genus. Lec. (1859b, p. 537) reports that a specimen of *cinctus* was sent to him by Melsheimer and that it did not differ from *parvatus*. This was most probably an authentic Say specimen and the synonymy should be accepted. There is no reason to designate a neotype. — *Olisthopus parvatus* [Lth., 1966, p. 553].

1642 *Lebia atriventris* (1823b: 13). No type area given. Say's description of the coloration is decisive. A ♀ from Arlington, Mass., designated as *neotype*, and the place as type loc. — *Lebia atriventris* [Madge 1967, p. 153].

1643 *Lebia tricolor* (1832b: 11). Type area Pennsylvania, named in the first place, herewith designated. Say's description is conclusive. In the Paris Museum is a big ♀ (8.5 mm.) with two green Dejean labels: (a) "tricolor Say, in Amer. Bor."; (b) "D. Say." This I have designated as *lectotype*. — *Lebia tricolor* [Madge 1967, p. 156].

1655 *Lebia viridis* (1823b: 14). No type area given. Say's description refers to the brilliant metallic, greenish form of this complex species, as conceived by Madge (1967, p. 179 a.f.). To the same form belongs the designated *neotype*: ♂, Camp Hill, Penn.; the place selected as type loc. — *Lebia viridis* [Madge 1967, p. 177].

1667 *Lebia ornata* (1823b: 13). No type area given. Say's description of the elytral pattern is decisive; it refers to the northern form with small, isolated pale spots (see Madge, 1967, p. 209 a.f.)<sup>8</sup> and so does the *neotype*: ♀ from Wissahickon, Penn., which also is designated as type loc. — *Lebia ornata* [Madge 1967, p. 208].

1707 *Cymindis viridipennis* (1823b: 9). Type area Pennsylvania. Say's description seems conclusive; it fits the 3 ex. in coll. Lec. (MCZ), and so does the *neotype*: ♀ from Washington Co., Penn.; the place designated as type loc. — *Calleida viridipennis* [Lec. & Horn 1882, p. 55].

1712 *Cymindis purpurea* (1823b: 10). Type area "Missouri" (probably including Nebraska). Say's description seems to be conclusive. He calls the penultimate tarsal segment "bilobate" (as for *viridipennis*), which should exclude the otherwise similar *Philophuga viridis* Dej. A ♂ from Nebraska designated as *neotype*; it belongs to the blue form. — *Calleida purpurea* [Lec. & Horn 1882, p. 55].

1726 *Lebia platicollis* (1823b: 14). No type area given. A syn-

<sup>8</sup>Madge, by mistake, gives Dejean as author of *ornata* on all identification labels distributed among museum specimens.

onym is *fuscate* Dej. (1831) but not *complanata* Dej. (1826), as assumed by Lec. (1859b, p. 446). The hind-angles of prothorax are said by Say to be "very obtuse." As a "Var. a" he describes a form with long, pale humeral spot which must be *limbata* Dej. A ♂ from Allegheny, Penn., designated as *neotype*, and the place as type loc. — *Pinacodera platicollis* [Horn 1881, p. 40].

1731 *Cymindis laticollis* (1834: 413). Type area "near the Rocky Mountains." Lec.'s first specimen as well as the one used for neotype agree with Say's description. A ♂ from Colorado designated as *neotype*, and this state as type area. — *Cymindis laticollis* [Horn 1882, p. 43].

1746 *Cymindis pilosus* (1823b: 10). No type area given. Say's description is not decisive though the "transverse" punctures on the elytra point to *pilosa* auct. as conceived in coll. Lec. (MCZ). Say's varieties  $\alpha$ ,  $\beta$  and  $\gamma$  belong to other species. A ♂ from Dorchester, Mass., designated as neotype, and the place as type loc. — *Cymindis pilosa* [Horn 1882, p. 43].

1756 *Cymindis sinuatus* (1823b: 8). Type area Maryland. The description is conclusive. A ♀ from Maryland designated as *neotype*. — *Apenes sinuata* [Horn 1881, p. 40].

1783 *Brachinus cyanipennis* (1823a: 143). Type loc. Engineer Cantonment, Missouri. This, as interpreted by Lec. in his collection (MCZ), is the species deviating from all others in North America by possessing long, erect hairs in the elytral striae (T. L. E.). A ♂ from Ames, Iowa, designated by T. L. Erwin as *neotype*. — *Brachinus cyanipennis* [erect setae of elytral depressions  $2\times$  or more as long as elytral pubescence].

1794 *Brachinus stygicornis* (1834: 415). Type area "Missouri" (possibly including Nebraska). This is an exceedingly variable species which includes also *quadripennis* Dej. (1825) and Dejean's name has priority (T. L. E.). A ♂ from South Bend, Nebraska, was designated by T. L. Erwin as *neotype*, and the place as type loc. — *Brachinus quadripennis* Dej. [tibiae and tarsi infusate, abdomen dark brown to black].

1806 *Epomis tomentosus* (1823b: 60). Type area Pennsylvania. Say's description, e. g. of the dilated, truncate terminal segment of the palpi, seems to be conclusive. A ♀ from Pennsylvania designated as *neotype*. — *Chlaenius tomentosus* [Bell 1960, p. 103].

1814 *Chlaenius impunctifrons* (1823b: 64). No type area given. Say's description is not conclusive; I have followed Lec., according to his collection (MCZ), and Bell (1960, p. 136). A ♂ from Dor-

chester, Mass., designated as *neotype* and the place as type loc. — *Chlaenius impunctifrons* [Bell 1960, p. 136].

1815 (syn.) *Chlaenius circumcinctus* (1834: 418). Type area Louisiana. Say describes the irregular punctuation of the prothorax and the interpretation is certain. His name is a synonym of *perplexus* Dej. (1831), erroneously recorded from Africa (see Lth., 1955a, p. 25; Bell, 1960, p. 145). A ♂ from Louisiana designated as *neotype*. — *Chlaenius perplexus* Dej. [Bell 1960, p. 145].

1817 *Chlaenius pensylvanicus* (1823b: 66). No type area given. (The name *pensylvanicus* is a manuscript name of Melsheimer and does not necessarily imply that Say's specimens had the same provenience.) The description of color given by Say seems sufficient for an interpretation. A ♂ from Pennsylvania designated as *neotype*, and the state as type area. — *Chlaenius pensylvanicus* [Bell 1960, p. 146].

1822 *Chlaenius nemoralis* (1823b: 65). Type area Pennsylvania, Georgia, or Florida; the last-named state herewith designated. Since the strikingly dull prothorax of *nemoralis* auct. is not mentioned by Say, the description could equally well be applied to *tricolor* Dej. (1826) with which it is commonly confused. I have followed Lec., according to his collection (MCZ), and Bell (1960, p. 140). A ♂ from Winter Park, Fla., designated as *neotype*, and the place as type loc. — *Chlaenius nemoralis* [Bell 1960, p. 140].

1830 *Chlaenius solitarius* (1823b: 65). Type area "on the Missouri" (that is, the river). Say's description of form and punctuation of prothorax, as well as of the "polished" elytra, seems to exclude related species. A ♂ from Dubuque, Iowa, designated as *neotype*, and the state of Iowa as type area. — *Chlaenius solitarius* [Bell 1960, p. 111].

1838 *Chlaenius aestivus* (1823b: 62). No type area given. In Say's description, the combination of large size, narrow prothorax, and bicolored upper surface seems to exclude all other species of the genus. A ♂ from Rosslyn, Virginia, designated as *neotype*, and the place as type loc. — *Chlaenius aestivus* [Bell 1960, p. 120].

1842 *Chlaenius laticollis* (1823b: 64). Type area "Missouri" (possibly including Nebraska). Say's description is not conclusive. I have identified the species as defined by Bell (1960, p. 129). A ♀ from Tonganoxie, Kansas, designated as *neotype*. — *Chlaenius laticollis* [Bell 1960, p. 120].

1856 *Chlaenius emarginatus* (1823b: 63). No type area given. Say's remarks concerning the labrum: "deeply emarginated" and "profoundly and obtusely emarginate," make his description conclu-

sive. In the Paris Museum is a ♂ with two green Dejean labels: (a) "emarginatus Say, in Amer. Bor.;" (b) "D. Say." This I have designated as *lectotype*. Selected type loc.: White Sulphur Springs, W. Va. (MCZ). — *Chlaenius (Anomoglossus) emarginatus* [Bell 1960, p. 106].

1858 *Chlaenius pusillus* (1823b: 63). No type area given. Say's description of the deeply emarginate labrum, together with the small size, is sufficient for an interpretation. A ♂ from Franklinville, Penn., designated as *neotype*, and the place as type loc. — *Chlaenius (Anomoglossus) pusillus* [Bell 1960, p. 107].

1860 *Chlaenius lithophilus* (1823b: 62). No type area given. The small size is sufficient for the interpretation of Say's name. A ♂ from Rivervale, N. J., designated as *neotype* and the place as type loc. — *Chlaenius (Brachylobus) lithophilus* [Bell 1960, p. 137].

1862 *Oodes parallelus* (1834: 420). Type area Louisiana. Say's description is conclusive. A ♂ from Louisiana designated as *neotype*. — *Oodes (Lachnocrepis) parallelus* [Lec. & Horn 1882, p. 29].

1882 (? syn.) "*Amara ? grossa*" (1834: 430). Type area "N. W. Territory." Ball (1960, p. 48) pointed out that Say's description is sufficient for deciding that his species is the same as *zabroides* Lec. and that, therefore, Say's name has priority. A ♀ from Denver, Colo., designated as *neotype*, and the place as type loc. (Lth., 1968). — *Euryderus grossus* [Lth., 1968, p. 747].

1897 *Harpalus erraticus* (1823b: 27). No type area given. Say's description is almost conclusive and *retractus* Lec. seems unlikely for geographical reasons. A ♂ from Medora, Kansas, designated as *neotype*, and the place as type loc. (Lth., 1968). — *Harpalus erraticus* [Lth., 1968, p. 766].

1903 (syn.) *Harpalus viridis* (1823b: 31). No type area given. Application of Say's name is clear from his mentioning the elytral pubescence; it is a synonym of *affinis* Schrank 1781, *aeneus* Fabr. 1792, and *viridiaeneus* Beauv. 1805. A ♂ from East Boston, Mass., designated as *neotype*, and the place as type loc. — *Harpalus affinis* Schrank [Lth., 1968, p. 768].

1904 *Harpalus amputatus* (1834: 432). Type area "N. W. Territory." Say separates his species from *aeneus* F. (= *affinis* Schrank) on the nonsinuate elytral apex and his description may be regarded as decisive. A ♂ from San Luis Valley, Colo., designated as *neotype*, and the place as type loc. — *Harpalus amputatus* [Lth., 1968, p. 769].

1922 *Harpalus faunus* (1823b: 28). Type area not given. Say mentions the punctulate elytral striae which makes the interpretation virtually conclusive (see Ball & Anderson, 1962, p. 12). Apparently,

his concept of *faunus* was, however, composite: a ♂ in the Paris Museum, with two green Dejean labels: (a) "Faunus Say" and (b) "D. Say," belongs to *pensylvanicus* DeG. and should not be used for lectotype. A ♂ from Pennsylvania designated as *neotype*, and the state as type area (Lth., 1968). — *Harpalus faunus* [Lth., 1968, p. 759].

1956 *Harpalus herbivagus* (1823b: 29). No type area given. The impunctate basal foveae of prothorax are mentioned in the description, and the interpretation is therefore rather conclusive. A ♂ from Rumney, N. H., designated as *neotype*, and the place as type loc. (Lth., 1968). — *Harpalus herbivagus* [Lth., 1968, p. 794].

2009 *Harpalus vulpeculus* (1823a: 30). No type area given. Say's description seems to be decisive. A ♂ from Washington, D.C., designated as *neotype*, and the place as type loc. (Lth., 1968). — *Trichotichnus vulpeculus* [Lth., 1968, p. 818].

2010 (syn.) *Harpalus iricolor* (1834: 432). This is a *nomen nudum* without formal description. Say (l. c.), by some mistake, refers to a "*Harpalus iricolor*" as described by him and being the same as *dichrous* Dej. (1829), that is, a *Trichotichnus*.

2015 (? syn.) *Harpalus iripennis* (1823b: 30). No type area given. The name has been interpreted according to coll. Lec. (MCZ) who considered it identical with his own *Selenophorus varicolor*. It is a species with strikingly large head and impunctate elytral striae; the penis is very characteristic (see Lth., 1968). *S. depressulus* Csy., a supposed synonym in Leng (1920), is a distinct species. A ♂ (with dissected genitalia) from Enterprise, Fla., designated as *neotype*, and the place as type loc. — *Selenophorus iripennis* [Lth., 1968, p. 823].

2051 *Harpalus hylacis* (1823b: 31). No type area given. Say's description of the pro- and meso-tarsi (though no correlation with sex is stated) seems to make the interpretation reliable. A ♂ from Dorchester, Mass., designated as *neotype*, and the place as type loc. (Lth., 1968). — *Gynandropus hylacis* [Lth., 1968, p. 821].

2070 *Harpalus carbonarius* (1823b: 32). No type area given. Since Say mentions the red spot on frons, the pubescence of the prosternum, and the depressed sides of the prothorax, his description must be regarded as conclusive. A ♂ from Camden, S. C., designated as *neotype*, and the place as type loc. (Lth., 1968). — *Anisodactylus (Triplectrus) carbonarius* [Lth., 1968, p. 848].

2071 *Harpalus rusticus* (1823b: 32). No type area given. The current interpretation of Say's name is somewhat dubious. The palpi are described as "reddish-brown" and the margins of prothorax

are "not depressed" (both characters fitting *dulcicollis* Laf. 1841). This, however, does not provide sufficient reason for removing Say's name from the by far commonest species of subg. *Gynandrotarsus* (*Triplectrus*). A ♂ from Rumney, N. H., designated as *neotype*, and the place as type loc. (Lth., 1968). — *Anisodactylus* (*Gynandrotarsus*) *rusticus* [Lth., 1968, p. 843].

2092 *Harpalus agricola* (1823b: 33). No type area given. In coll. Dejean (MNP) is a ♂ carrying three green labels: (a) "♂"; (b) "agricolus Say, in Amer. bor."; (c) "D. Say." This, without any doubt, is an authentic Say specimen. Unfortunately, it belongs to *melanopus* Hald. Say's description is not decisive. Actually, Lec. originally (1848, p. 379), used the name for *melanopus* but, in his catalogue (1863), introduced the practice followed ever since (e.g. by Horn, 1880), that is, applying the name to the species with a single pair of setiferous punctures on clypeus. It is justified, I think, to regard Say's *agricola* as a composite concept, including both species concerned, and to apply it according to present practice. Therefore, I have refused to select the Paris specimen as lectotype and have made a neotype of the "true" *agricola*. Since, in the original description, Say used "agricolus" and "agricola" as alternative spellings, the latter one, linguistically correct, should be used. A ♀ from Allegheny, Penn., designated as *neotype*, and the place as type loc. (Lth., 1968). — *Anisodactylus agricola* [Lth., 1968, p. 856].

2107 *Harpalus caenus* (1823b: 34). No type area given. In the Paris Museum is a ♀ with three green Dejean labels: (a) "♀"; (b) "caenus Say, in Amer. Bor."; (c) "D. Say." The specimen belongs to *caenus* auct. and I have labeled it as *lectotype*. Designated type loc.: Newark, N. J. (Lth., 1968). — *Anisodactylus caenus* [Lth., 1968, p. 860].

2111 *Feronia interstitialis* (1823b: 57). Type area "Missouri" or Pennsylvania. Though the elytral pubescence is not mentioned by Say, the description may be regarded as decisive. A ♂ from Camp Hill, Penn., designated as *neotype*, and the place as type loc. — *Anisodactylus* (*Amphasia*) *interstitialis* [Lth., 1968, p. 860].

2127 *Harpalus baltimorensis* (1823b: 33). Type loc. (Say, 1834, p. 431) Baltimore, Md. The description is conclusive. After *sanctae-crucis* F. 1798 was interpreted as referring to the same species (Schaum, 1847, p. 47), Say's name has fallen into synonymy. Say consistently (also 1834, p. 431) used the spelling "baltimorensis" and there is no reason to change this. A ♂ from Pennington Gap, Va., designated as *neotype*. — *Anisodactylus* (*Anadaptus*) *sanctae-crucis* F. [Lth., 1968, p. 839].

(Not in Leng.) *Harpalus similis* (1823b: 29). Type area North Carolina. This name, lacking in Leng (1920), has been interpreted according to v. Emden (1942, p. 541) who, apparently following a suggestion made by Lec. (1859b, p. 458), regarded it as valid name for the species afterwards described by Dejean (1829, p. 357) as *Harpalus agilis*. The selected neotype agrees exactly with Lec.'s first specimen, labeled "agilis Dej. ? similis Say" (as in his catalogue, 1863, p. 12). A ♂ from Florida designated as *neotype*. — *Anisotarsus similis* [Emd. 1953, p. 526].

2139 *Feronia terminata* (1823b: 48). No type area given. Say's description is not quite conclusive. Though his referring the species to *Calathus* (l. c.) is quite conceivable from the general habitus of the insect, the expression "posterior angles (of prothorax) subacute" is dubious. It seems, however, justified to follow general practice, as expressed in coll. Lec. (MCZ). A ♂ from Cleveland, Ohio, designated as *neotype*, and the place as type loc. (Lth., 1968). — *Anisotarsus terminatus* [Lth., 1968, p. 867].

2156 *Feronia autumnalis* (1823b: 48). No type area given. The description is insufficient and the name was interpreted from coll. Lec. (MCZ). A ♂ from Nahant, Mass., designated as *neotype*, and the place as type loc. — *Episcopellus autumnalis* [Lth., 1968, p. 813].

2163 *Feronia atrimedeae* (1823b: 39). Type area "from the Missouri" (that is, the river). Say's description seems conclusive. The dilated ♂ pro-tarsi exclude *Stenolophus* (*Agonoderus*) *comma* F. and its relatives. There is no reason to change the original spelling into "atrimedius." A ♀ from Iowa City, Iowa, designated as *neotype*, and Iowa as type area. — *Bradycellus* (*Triliarthrus*) *atrimedeus* [Lth., 1968, p. 899].

2171 *Trechus rupestris* (1823b: 91). No type area given. Say's description is almost conclusive. He mentions the slightly marked hind-angles of prothorax, characteristic of *rupestris* auct., and the given color pattern is the same as in the pale form of that species (with unicolorous, rufous prothorax). To this belongs the first specimen in coll. Lec. (MCZ) and the neotype here selected agrees with it. A ♂ from Arlington, Mass., designated as *neotype*, and the place as type loc. — *Bradycellus* (*Stenocellus*) *rupestris* [Lth., 1968, p. 886].

2173 *Acupalpus debilipes* (1834: 435). Type area Indiana. Like *cinctus*, this is a dubious name. Lec. (1868), with a question mark, referred it to *parallellus* Chd., that is, the dark form of *rupestris* Say; Casey (1914) treated it as a distinct species of *Bradycellus* (*Stenocel-*

lus). Say's description gives no clue; the color seems too dark even for the dark form of *rupestris* and fits *lecontei* Cki. much better, but this species is excluded by the reported presence of scutellar and dorsal punctures on the elytra. The name should be treated as a *nomen dubium* and no neotype should be designated.

2174 *Stenolophus cinctus* (1834: 434). Type area Massachusetts. Say placed this species in a different genus from *rupestris*, *Stenolophus* contra *Acupalpus* (1834, p. 435), and compared it with *ochropezus* Say. The scutellar stria is said to be lacking, as is often the case in *S. humidus* Ham. which, actually, could be concerned. Lec. (1859b, p. 548), however, did not hesitate to regard *cinctus* as "a variety" of *rupestris*; Casey (1914), as a distinct species of *Bradycellus* (*Stenocellus*). Say's name should be regarded as a *nomen dubium* and no neotype should be designated.

2218 *Feronia ochropeza* (1823b: 54). No type area given. In the Paris Museum is a ♂ with two green Dejean labels: (a) "ochropezus Say, in Amer. bor."; (b) "D. Say." It agrees with the general concept of *ochropezus* and I have designated it as *lectotype*. Designated type loc.: Camden, S. C. (Lth., 1968).—*Stenolophus ochropezus* [Lth., 1968, p. 911].

2238 *Trechus conjunctus* (1823b: 40). No type area given. Say's description seems sufficient for an interpretation. A ♂ from White Sulphur Springs, W. Va., designated as *neotype*, and the place as type loc.—*Stenolophus conjunctus* [Lth., 1968, p. 921].

2249 *Trechus partarius* (1823b: 90). No type area given. Say's careful description of color and of the punctuation of the prothorax seems to exclude other species of subg. *Tachistodes* and agrees with Lec.'s concept of *partarius* as expressed in his collection (MCZ). A ♀ from Gorham, Ill., designated as *neotype*, and the place as type loc. (Lth., 1968).—*Acupalpus* (*Tachistodes*) *partarius* [Lth., 1968, p. 937].

2287 *Omophron tessellatum* (1823a: 152). Type loc. Elkhorn Creek, "Missouri" (= NE Nebraska). Say's description of the color pattern of the head seems to exclude other species. Say spelled the name with one "l" and so did, rightly, Benschoter & Cook (1956, p. 422). A ♂ from Kansas designated as *neotype*.—*Omophron tessellatum* [Lth., 1961, p. 12].

#### SUMMARY

Thomas Say described 147 species of ground-beetles (*Carabidae*, excl. *Cincindelinae*) from North America north of Mexico. His collection was destroyed, but before that he sent material of several

of his new species to Count Dejean in France. These specimens eventually, as part of the vast Oberthür collection, passed into the possession of the Muséum National d'Histoire Naturelle in Paris. Of 27 Say species mentioned by Dejean (1826-31) as received from the author, authentic specimens of 12 were found. For different reasons, 4 of these were considered not suitable, whereas of the 8 remaining species *lectotypes*, property of the Paris Museum, were designated.

For the majority of Say species, it was necessary to make *neotypes*, covering 132 of his names. All these constitute a separate collection belonging to the Museum of Comparative Zoology, Harvard University, Cambridge, Mass. As substitute for the lectotypes located in Paris, each of the 8 species concerned is represented in the MCZ by a specimen, "compared with lectotype."

Seven specific names given by Say could not be interpreted. For these no neotype was selected.

A strict acceptance of all specimens in the Paris Museum, labeled as arrived from Say, as true exponents of his species concept in every particular case, would have forced the removal of a name from one species to another within the same genus in four cases — an extremely unfortunate procedure. However, we have regarded these four Say "species" — all in critical groups — as composite, implying that the specimen sent to Dejean may well have been specifically distinct — as now understood — from the specimen(s) kept in Say's collection.

We have thus consistently retained Say's names as currently used, based on the interpretations by Leconte, according to his collection (MCZ). No changes of nomenclature have been proposed.

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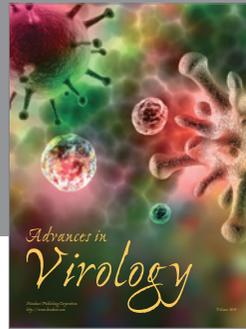
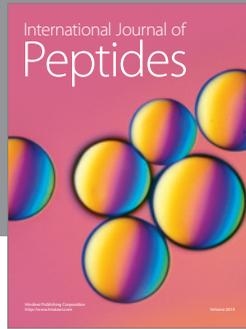
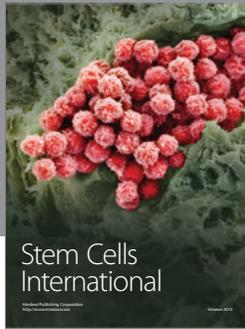
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