

XI. *Supplement to the Geodephagous Coleoptera of Japan, chiefly from the collection of Mr. George Lewis, made during his second visit, from February, 1880, to September, 1881.* By H. W. BATES, F.R.S., F.L.S.

[Read June 6th, 1883.]

PLATES XII. and XIII.

DURING his second visit to Japan, in 1880 and 1881, Mr. Lewis made an extended tour through the islands, and collected industriously, with the aid of his Japanese assistants, in the central and northern parts of the main island and in the southern part of Yezo, as well as in the southern provinces, where most of his material was obtained on the former occasion. The map appended to the present paper and the itinerary at the end of these introductory remarks will enable the reader to form a better idea of the extent of his excursions through the islands than could be given by a detailed description. The result of his labours, as far as relates to the *Geodephaga*, is the discovery of 118 new species, besides the detection of a number previously known from other regions, but not from Japan, which, with a few discovered by other collectors, enable me to add 159 species* to the list of the *Geodephaga* given in my first paper, "On the Geodephagous Coleoptera of Japan," published in these Transactions for the year 1873, pp. 219—322. The following is a list of the species to be added to that given in the paper above referred to:—

CICINDELIDÆ.

Cicindela Niohozana.
 „ *ovipennis.*
 „ *novitia.*
 „ *Niponensis.*
 (= *Sumatrensis*, Herbst, var.).

CARABIDÆ.

ELAPHRINÆ.

Elaphrus dauricus, Mor.

NEBRIINÆ.

Nebria Lewisi, Bates.
 „ *Sadona.*
 „ *sæviens.*
 „ *reflexa.*
 „ *Japonica.*
 „ *chalceola.*
 „ *Snowi.*
 „ *jamata*, Mots.
Leistus crassus.
 „ *Alecto.*

* Including the "Additions to the List of Geodephagous Coleoptera of Japan," by myself, in Trans. Ent. Soc. Lond., 1876, p. 1, and a species described by Mr. Lewis in Ann. & Mag., Dec., 1879.

Leistus prolongatus.

„ *obtusicollis.*

„ *subæneus.*

Carabus telluris, Lewis.

(= *granulatus*, L., var.).

„ *Yezoensis.*

„ *Vanvolæmi*, Putz.

„ *conciliator*, Fisch.

„ *Mæander*, Fisch.

„ *aquatilis.*

„ *arboreus*, Lewis.

„ *exilis.*

„ *tenuiformis.*

„ *gracillimus.*

„ *Fujisanus.*

„ *porrecticollis.*

„ *opaculus*, Putz.

„ *Gehinii*, Fairm.

Damaster capito, Lewis.

Calosoma Chinense, Kirby.

SCARITINÆ.

Dyschirius Yezoensis.

„ *glypturus.*

BROSCINÆ.

Brososoma elegans.

PANAGÆINÆ.

Peronomerus fumatus, Schaum.

„ *auripilis.*

CHLÆNIINÆ.

Chlænus prostenus.

HARPALINÆ.

Ophonus constrictus.

Harpalus vicarius, Har.

„ *leptopus.*

„ *chlorizans.*

„ *fuliginosus*, Duft.

„ *flavitaris*, Dej.

„ *variipes.*

Stenolophus connotatus.

„ *agonoides.*

Acupalpus marginatus, Lucas.

Tachycellus subditus, Lewis.

AMARINÆ.

Bradytus macros.

Amara Zimmermanni, Putz.

(= *chalcites*, Zim., var.).

„ *striatella*, Putz.

(= *chalcites*, Zim., var.).

PTEROSTICHINÆ.

Morio Japonicus.

Trigonognatha aurescens.

Allotriopus hoplites.

Hypherpes colonus.

Pterostichus macrogenys.

„ *pachinus.*

„ *asymmetricus.*

„ *spiculifer.*

„ *mirificus.*

„ *polygenus.*

„ *sejunctus.*

„ *defossus.*

„ *leptis.*

„ *ambigenus.*

Platysma oblongopunctata, Fab.

Lagarus nimbatidius, Chaud.

„ *dulcis.*

Pæcilus prolixus.

(= *fortipes*, Chaud. var. ?)

Stomis prognathus.

ANCHOMENINÆ.

Eucalathus colpodoïdes.

Crepidactyla melantho.

Trephionus Nikkoensis.

Anchomenus subovatus, Putz.

„ *xestus.*

„ *calleides.*

„ *sculptipes.*

„ *suavissimus.*

„ *Oguræ.*

„ *charillus.*

Colpodes Bentonis.

„ *mutator.*

„ *integratus.*

„ *astictus.*

„ *amphinomus.*

„ *limodromoides.*

„ *elainus.*

„ *chloreis.*

„ *Hakonus*, Har.

„ *speculator*, Har.

„ *aurelius.*

„ *rubriolus.*

Euplynes Batesi, Har.

PERIGONINÆ.

Perigona acupalpoides.

„ *discipennis.*

„ *sinuata.*

„ *tachyoïdes.*

POGONINÆ.

Pogonus Japonicus, Putz.

TRECHINÆ.

Trechus discus, F.

„ *oreas.*

„ *punctatostriatus*, Putz.

„ *vicarius.*

BEMBIDIINÆ.

Tachyta nana, Gyll.

Tachys scydmænoïdes, Nietn.,, *reflexicollis*.,, *euglyptus*.*Cillenum Yokohamæ*.*Lymnæum quadri-impressum*, Mots.*Bembidium varium*, Ol.,, *articulatum*, Panz.,, *pædiscum*.,, *Sturmii*, Panz.,, *xanthocera*.,, *tetraporum*.,, *aureofuscum*.,, *pliculatum*.,, *lucillum*.,, *amaurum*.,, *Nikkoense*.,, *elongatum*, Dej.,, *cnemidotum*.,, *oxyglymma*.,, *eurygonum*.,, *sanatum*.,, *semilutitum*.,, *chloreum*.,, *misellum*, Har.,, *leucolenum*.,, *pogonoïdes*.,, *æneipes*.,, *chloropus*.,, *striatum*, F.

HEXAGONIINÆ.

Trigonodactyla insignis.

ODACANTHINÆ.

Casnonia litura, Schmidt-Goeb.,, *ægrotæ*.

DRYPTINÆ.

Drypta fulveola.*Dendrocellus geniculatus*, Klug.

BRACHININÆ.

Brachinus æneicostis.

COPTODERINÆ.

Catascopus ignicinctus.*Lioptera erotyloïdes*.*Coptodera Japonica*.,, *subapicalis*, Putz.*Mochtherus luctuosus*, Putz.*Dolichoctis ornatellus*.

DROMIINÆ.

Dromius campanulatus.,, *breviceps*.,, *crassipalpis*.*Blechnus glabratus*, Dufts.,, *maurus*, Sturm.*Metabletus 4-punctatus*, Schmidt-Goeb.?*Demetrias marginicollis*.

PHYSODERINÆ.

Lachnoderma asperum.

PENTAGONICINÆ.

Pentagonica angulosa.

LEBIINÆ.

Lebia duplex.,, *sylvarum*.,, *Iolanthe*.

The number of species contained in the original list was 244, but three of these (*Calosoma mikado*, *Pterostichus Japonicus*, and *P. tropidurus*), having been proved to be synonyms of others in the list, must be deducted, leaving the number 241, which, added to the 159 now added, make a total of 400.* The changes and rectifications to be made in the former list consequent on later observations, the institution of new genera and so forth, are as follow :—

Notiophilus impressifrons, Mor. (nec Chaud.).= *Niponicus*, Lewis, Cat. Coleop. Jap.*Calosoma mikado*,= *Maximowiczi*, Mor.*Panagæus singularis*.= *Tinoderus* id., Chaud.*Chlænien hospes*.= *posticalis*, Mots., Chaud.*Chlænien subhamatus*.= *biguttatus*, Mots., Chaud.

* Some few single specimens taken by Mr. Lewis remain undescribed; these would bring the total to about 406.

- Chlœnius culminatus*.
 = *nigricans*, Wiedm., Chaud.
Harpalus levicollis (nec Duft.).
 = *congruus*, Mots.
Harpalus Japonicus.
 = *rugicollis*, Mots.
Harpalus argutoroides.
 = *Oxycentrus* id., Chaud.
Harpalus relucens.
 = *Iridessus* id., Bates.
Harpalus zabroïdes (nec. Dej.).
 = *corporosus*, Mots.
Harpalus lucidus.
 = *Iridessus* id., Bates.
Pristonychus œneolus.
 = *Eucalathus* id., Bates.
Pristodactyla cyclodera.
 = *Crepidactyla* id.
 TRECHICHINÆ.
 = PERIGONINÆ.
Trechichus Japonicus.
 = *Perigona Japonica*, Bates, Putz.
Triplogenius cuprescens.
 = *Trigonognatha* id., Mots., Bates.
Pœcilus planicollis, Mots. ?
 = *encopoleus*, Solsky.
Pœcilus lepidus, nec F.
 = *fortipes*, Chaud.
Pterostichus microcephalus (nec
 Mots.).
 = *Lagarus nimbatus*, Mor.
Pterostichus Japonicus, Mots.
 = *prolongatus*, Mor.
Pterostichus tropidurus.
 = *prolongatus*, Mor.
Bembidium cognatum, Mor. (nec
 Dej.).
 = *B. consentaneum*, Munich Cat.
Crepidogaster bicolor (nec Boh.).
 = *Styphromerus Batesi*, Chaud.
Dromius quadraticollis (nec Mor.).
 = *prolixus*, Bates.
Paraphœa signifera.
 = *Anchista binotata*, Dej., Chaud.
Cymindis pictula.
 = *Uvea* id., Fauvel.

With regard to the relations of the Geodephagous Fauna of Japan to that of other countries, the new material does not supply any facts to overthrow, or even to essentially modify, the views put forward in the Introduction to the paper of 1873. But though it can no longer be pleaded that our knowledge of the Japanese fauna in this department is too limited to justify any conclusions being drawn regarding its relations—for 400 species cannot be very far off the total number, seeing that our well-explored islands furnish only 311—our much less complete knowledge of the corresponding part of the faunas of Eastern Asia compels us to be cautious in our generalisations. We cannot, for example, accept as a final conclusion the large proportion of peculiar genera which the present state of our knowledge gives to Japan; although the later discoveries have not diminished it, the number in 1873 having been nine genera peculiar out of a total of 84, whilst now we find 11 out of a total of 114. Two of the former nine have since proved to be not confined to Japan, but found elsewhere, reducing the number to seven; but, on the other hand, four new endemic genera have been discovered. Nor can we determine with any degree of certainty, or even discuss to any good purpose, the question—To what part of the Asiatic mainland is Japan most nearly related in the temperate elements of its fauna? The great majority of the species of North

Temperate facies or affinities are peculiar, as far as we at present know, to Japan, and those which are not peculiar are as often Chinese species (found in the regions of the lower Yang-tsze, or more to the south) as they are East Siberian. The strong tropical element which constitutes the most striking feature of the Japanese insect fauna is confirmed by the new material; 30 of the now-known Japanese genera of *Geodephaga* being found elsewhere only in the tropics, chiefly in the Indo-Malayan region. The Palæarctic relations have, on the other hand, been strengthened by the discovery of several genera highly characteristic of that great province, such as *Elaphrus*, *Leistus*, *Ophonus*, *Stomis*, *Cillenum*, *Lymnæum*, and *Blechrus*, besides the somewhat less strictly Palæarctic *Pogonus*, *Broscosoma*, *Metabletus*, and *Demetrias*.

The peculiarly Palæarctic (or rather North-Temperate) genera found in Japan are fewer in number than the Tropical, being 18 only, but of the remaining genera of the fauna, 58 in number, the contained species are more nearly related to North-Temperate forms of the same genera than to those of other parts of the world; this may be said to be the case in *Carabus*, *Anchomenus*, *Harpalus*, and many others, though in such genera as *Cicindela*, *Chlænius*, *Lebia*, and others, the specific tropical element is undoubtedly of importance.

The prevailing character of the Japanese fauna in the great section of the Coleoptera to which this paper refers is, however, North Temperate. This is to be expected from the latitude and geographical position of the islands, but the large proportion of tropical genera and species is most remarkable, and forms a problem in geographical distribution of great interest and difficulty. Some of the species are at present known only from distant countries like Java, Burmah, and Assam—not allied, but identical species; others, including two genera (*Taiconia* and *Amphimenes*), are peculiar, as far as we know, to Japan. Whether this element in the fauna was derived directly from the distant south by oceanic currents, or *viâ* the Philippines, Formosa, and the Loo Choo Archipelago, or again *viâ* the mainland of China, it is waste of time to discuss in the present state of our knowledge. Tropical forms of other groups of animals are known to range into temperate latitudes in Eastern Asia, but most of the tropical species of Japanese

Geodephaga are not known to occur in intermediate latitudes in China or in the islands just mentioned. Whether this absence is real, or due only to our want of knowledge, and whether, if real, the absence has been brought about by the destruction of the primitive forests of China, many of the tropical species being forest forms, must be left for decision to the time when the smaller species of Coleoptera in China shall have been collected with the same completeness as Mr. Lewis has done those of Japan.

MR. G. LEWIS' ITINERARY (1880—1881).

Approx. altitude in figures (feet). Brackets indicate the chief excursions.

Italics trained native collector sent at date.

1880.

Feb. 27.—	Yokohama (Tokio), sea-level, until	Mar. 16
Mar. 17.—	Miyanoshita, 1390 (Kiga, 1390; Ashinoyu, 2759)	19
„ 20.—	Yokohama (Bukenji, Oka, Kawasaki, Tokio, Kadzusa, Yokosuka, Oyama, 4100)	April 14
April 15.—	Miyanoshita, 1390 (Odawara, Tonosawa, 466; Ashinoyu, 2759)	16
„ 17.—	Hakone, 2424 (Gongensama Temple, 2474) ...	19
„ 20.—	Suyama (base of Fujisan, Mishima, 59).....	22
„ 23.—	Hakone, 2424 (elevated forests to the south, about 2788 feet).	
„ 24.—	Miyanoshita, 1390 (Kiga, 1391; Ojigoku, 4101; Miyagino, 1493; and Shinyuba, 2280; Oyu)..	May 3
May 4.—	Subashiri, 2723 (Otomi-toge, 3307; Gotemba, 1529; Fujisan, 12,360, to 3rd rest house, Kawaguchi lake)	10
„ 11.—	Miyanoshita, 1390 (Oyu and Shinyuba, 2280)..	14

Elevated forests above *Atami*, 4692, and *Yugashima*, in *Idzu*, 7 days.

„ 15.—	Yokohama (Enoshima, Bukenji, Tokio).....	23
„ 24.—	Oyama, in Sagami, 4100	26
„ 27.—	Yokohama	31
June 1.—	Tokio.	
„ 2.—	Koga.	
„ 3.—	Nikkô, 2329 (Chiuzenji, 4272; Nantaizan, 8188; Niohozan, 7874)	June 21
„ 22.—	Nowata, on the Watarasegawa.	

Tsukuba yama, 3609, 4 days.

„ 23.—	Yokohama and suburbs	July 5
July 6.—	Steamer to Hokkaido.....	8
„ 9.—	Hakodate.	
„ 13.—	Junsai Lake, beyond Nanaye (Suwaratake or Komanotake, 2742).....	17
„ 18.—	Hakodate (Ono, Akagawa, Nanaye)	27

Kakkumi, 3 days; *Matsumai*, 3 days.

July	28.—Junsai Lake (Nanayeyama)	July	30
„	31.—Hakodatè	Aug.	2
Aug.	3.—Steamer to Otaru	„	4
„	5.—Sapporo.....	„	16
„	16.—Bibi.		
„	17.—Tomakomai.		
„	18.—Shiraoi.		
„	19.—Horobetsu.....	„	20
„	21.—Mororan.		
„	22.—Steamer to Mori.		
„	23.—Hakodatè	„	29

Junsai, 3 days.

„	30.—Steamer to Awomori.		
„	31.—Hirosaki (Iwakisan, 4921).....	Sept.	2
Sept.	2.—Awomori (Soma, Tashironoyu, Yakotasan, 5000; Asamushi).....	„	9
„	10.—Hakodatè (Akagawa)	Oct.	9

Junsai, 2 days.

„	19.—Awomori, Tsudzureko, Akita, Sakata, Niigata, Sado, Nikkô*	„	29
Oct.	10.—Awomori and Kominato.		
„	11.—Shichinohe.		
„	12.—Sannohe	„	13
„	14.—Ichinohe.		
„	15.—Morioka.		
„	16.—Hanamaki.		
„	17.—Midzusawa (Kitakamigawa).		
„	18.—Kannari.		
„	19.—Furukawa.		
„	20.—Sendai, 138	„	22
„	23.—Fujita.		
„	24.—Fukushima (Motomiya).		
„	25.—Koriyama.		
„	26.—Shirakawa.		
„	27.—Koyebori.		
„	28.—Yaita.		
„	29.—Nikkô,* 2329	„	31
Nov.	1.—Utsunomiya, 384.		
„	2.—Tokio.		
„	3.—Yokohama	Nov.	15

Motomura, on *Oshima* or *Vries Island*, 5 days.

Dec.	20.—Miyanoshita, 1390 (Uyenoyu, Shinyuba, 2280) ..	Dec.	23
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1881.

Jan.	1.—Yokohama, until	Feb.	9
Feb.	10.—Steamer to Nagasaki, <i>via</i> Suwonada.		
„	13.—Nagasaki (Tomatzu, Ipongi, Nita, Mitsudake, 1600; Tagami, Kompira, Suwa Temple, Akonora, Inasa, Mogikoba, Shimabara, Un- sentake, Utsutsukawa, Mogi, Aba, Fukuda, Fukahori)	April	21

Goka, 1500, in *Kumakuni*, 17 days.

Oyayama, near *Kumamoto*, 13 days.

April	22.—Steamer to Kumamoto, in Higo.		
„	23.—Kumamoto (Goka Temple), 42	April	26
„	27.—Yatsushiro	„	28
„	29.—Konosè, 800, on the Kumagawa.		
„	30.—Ichiuchi or Ikenoshimo, 900 (Higashimata) ...	May	2
May	3.—Hitoyoshi, 1200 (Rakuwayama, 2200; Oguma)..	„	8
„	9.—Kuroheiji, 1300.		
„	10.—Yuyama, 3000 (Ichibosayama, 5000)	„	14
„	15.—Hitoyoshi, 1200 (Oguma, 2000).....	„	17
„	18.—Konosè, 800.		
„	19.—Yatsushiro.		

Yuyama, 7 days.

„	20.—Kumamoto	„	21
„	22.—Nagasaki	June	3
June	4.—Steamer to Kobè, <i>via</i> Shimonoseki.....	„	5
„	6.—Kobe (Hiogo, Minatogawa, Sannomiya, Ma- yasan, 1280)	„	9
„	10.—Kioto (138)	„	12
„	13.—Through Nara; crossing Yodogawa and Lake of Ogura, to Nikaido, in Yamato.		
„	14.—Left Nikaido, passing Yani and Tosanomachi to Natsumemura and Kamiichi, 613.		
„	15.—Kashiwagi, ? 2000 (Omine, 5643; Nishimura, Odaigahara, Ikenchaiya, and main road to Shingu)	„	24
„	25.—Nara (285)	July	1
July	1.—Ogura Lake, 120.		
„	2.—Kioto (138)	„	4
„	5.—Otsu (Biwa Lake, 240).		
„	6.—Osaka (Tsumiyoshi, Sakai)	„	8
„	9.—Kobe	„	19
„	20.—Otsu, 240 (Mayebara, Samegai).		
„	21.—Shinkano.		
„	22.—Hosokute (Kisogawa).		
„	23.—Nataksugawa.		
„	24.—Tsumago.		
„	25.—Agematsu.		
„	26.—Fukushima	„	29

Ontake, 10,000, 2 days.

„	29.—Yagohara (Torii toge, 4016).		
„	30.—Seba (Shiwojiri toge, 2503).		
„	31.—Shimonosuwa (Suwa Lake, Akinomiya).		
Aug.	1.—Wada toge, 5578.		
„	2.—Mochidzuki.		
„	3.—Oiwake, 3510.		
„	4.—Kurigahara (Usui toge, 4002)	Aug.	6
„	7.—Matsuida.		
„	8.—Fukui.		
„	9.—Niregi.		

Aug. 10.—Nikkô, 2329 (Imaichi, Niohozan, 7874)	Aug. 18
„ 19.—Chiuzenji (Nantaizan, 8188 ; Yumoto, 5013)...	„ 24
„ 25.—Nikkô, 2329.	
„ 26.—Ashiwo.	
„ 27.—Omama.	
„ 28.—Mayebashi.	
„ 29.—Numata, 1417 (Yubiso).	
„ 30.—Buno, 3008.	
„ 31.—Shimidzu toge, 5184.	
Sept. 1.—Muikamachi, 554.	
„ 2.—Nagaoka, 72.	
„ 3.—Sanjo, 65.	
„ 4.—Niigata (Shinanogawa)	Sept. 16

Sado (Kinpokusan, 1600), 13 days.

„ 17.—Nagaoka.	
„ 18.—Horinouchi.	
„ 19.—Urasa, 440 ; and Seki, 810.	
„ 20.—Futai (Nakano toge, 2800).....	„ 21
„ 22.—Yunoshiku (Mikuni toge, 4200).	
„ 23.—Shibukawa.	
„ 24.—Kumagai.	
„ 25.—Tokio	„ 27
„ 28.—Yokohama (Uyeno, Honjo, Kawasaki)	Nov. 3

The four principal islands of Japan or Dai-Nipon are:—Kiushiu, Shikoku, the main island (which has no native name), and Yezo. Hokkaido includes Yezo and the Kurile Islands.

Smaller islands from which specimens were obtained are :—Tsu-shima, Tanegashima, Amakusa, Oshima (Vries) and Sado.

A few specimens were obtained from Fusan, an open port in Chosen (Korea).

When no altitudes are given the places are usually at, or a little above, sea-level, and have not been measured.

CICINDELIDÆ.

Cicindela Niohozana.

Quoad formam *C. sylvaticæ* similis, supra cupreo-fusca fere ut in *C. hybrida*, elytris utrinque lunula interrupta humerali, fascia parum obliqua valde angulata maculaque rotundata submarginali ante apicem, flavescenti-albis, elytris passim haud profunde punctatis (punctis viridescentibus) et in interstitiis granulatis; labro albo, fere sicut in *C. gallica* sed longiori, medio basi valde convexo, antice medio longe producto, maris dente mediana valida, margine flexuoso, versus angulum antico-lateralem sinuato, fœm. antice

medio obtuse tridentato; palpis metallicis. Long. 16 mm., ♂, ♀.

Mt. Niohozan; flies like *C. Japonica*.

In colour and sculpture of the elytra this species, according to the description, must greatly resemble *C. Sachalinensis* of Morawitz; but it cannot be the same, as it is much nearer *C. Japonica* than *C. gallica* and *sylvicola*, with which latter alone Morawitz compares his species, and the form of the median fascia "more transverse" than *C. gallica*, besides the position of the subapical spot, which he terms "marginal," whereas it is remote from the margin, do not agree. The sculpture of the elytra agrees with Morawitz's description, as far as the mixture of shallow punctures and obtuse granules goes, but there are in addition distinct traces of the rows of larger punctures characteristic of the *C. sylvatica* group, of which Morawitz makes no mention; these punctures are very distinct along the basal depression on each elytron, but distinct traces also exist of the longitudinal row towards the suture. The under side of the thorax and the femora, with the sides of the basal ventral segments, are coppery red, scarcely shining, the rest of the abdomen and the legs brassy green; the sides of the sterna and the femora are clothed with coarse hair. The median fascia of the elytra is similar to that of *C. sylvatica*, with the important difference that it bends in the middle at a much more acute angle, and the inner part, or hook, dips down more and is much narrower than the outer or marginal part.

Cicindela ovipennis. (Pl. XIII., fig. 1).

Species singularis, elytris elongato-ovatis humeris nullis thoraceque elongato. Supra obscure rufo-cuprea, viridi-micans, elytris marginibus lætius cupreis, fascia brevissima mediana (a margine laterali distante) plus minusve curvata, transversim posita maculaque marginali ante apicem (interdum extus per marginem prolongata et virguliformi) albis (fasciola mediana nigro-marginata); capite sat magno exserto, thorace latiori; corpore subtus viridi-cupreo, ventro medio et apice obscuriori nitido; labro albo, convexo medio late modice producto, margine tridentato; palpis omnino metallicis. Long. $13\frac{1}{2}$ —15 mm., ♂, ♀.

Sado.

This curious species partakes of the characters of the two groups *C. campestris* and *C. germanica*, but the elytra are much more ovate than any other species known to me, *C. dromicoides* only approaching it in this respect. In the markings of the elytra it much resembles *C. Ismenia*. The head is moderately concave between the eyes, and somewhat regularly and strongly striated (more finely on the vertical forehead). The thorax is long and narrow, very slightly narrowed behind and with nearly straight sides, the surface vermiculate-rugose; the elytra are flattened and slightly explanated along the sides, and remarkably convex in the middle at three-fourths their length; their sculpture consists in bluish green punctures each surmounted (anteriorly) by a minute shining granule, and in an irregular row of much larger punctures each with a central golden point. The body beneath is glabrous, excepting (in some individuals) a few white hairs on the metasternum.

Cicindela Amurensis.

Cicindela amurensis, Morawitz, Bull. Acad. St. Petersb. 1863, p. 238; Bates, Trans. Ent. Soc. Lond., 1873, p. 227.

The typical form of this species, common in temperate latitudes of Eastern Asia from the Amur to the Yangtze, is, as described by Morawitz, $8\frac{1}{2}$ — $9\frac{1}{2}$ mm. long, and of metallic colours on its upper surface. The elytra are punctured; the punctures, though shallow, being rendered conspicuous by being each on a bluish green spot, contrasted with the coppery hue of the ground colour; and on the anterior margin of each puncture is a minute bright speck, a rudimentary granule. As a decisive character distinguishing this species from *C. literata* and allies, I may mention that the trochanters in all the legs are red.

On the sea-shore of Hakodate, where Mr. Lewis on his recent journey has met with this species, it occurs in a high degree of development, some of the examples measuring 11 mm., and being proportionately more robust, with wider pale elytral markings and more rounded thorax. In the same locality he found the following allied form, sufficiently distinct to merit a specific name:—

Cicindela novitia.

C. literata longior et paullo gracilior, supra subolivaceo-nigra thoracis limbo interdum obscure cupreo, subtus femoribusque viridi-auratis nitidis trochanteribus rufis; thorace fere cylindrico, elytris opacis tenuiter granulatis haud perspicue punctatis; signaturis sicut in *C. amurensi* sed latioribus, scilicet lunula humerali, ramo inferiori elongato apice retrorsum (versus basin) hamato-clavato, fascia mediana maxime tortuosa, vitta mediana marginali, lunulaque apicali cujus ramo superiori valde elongata subrecte discum versus extenso. Long. $9\frac{1}{2}$ — $10\frac{1}{2}$ mm., ♂, ♀.

Hakodate; Niigata.

Cicindela Sumatrensis, Herbst; Dejean, Sp. Gen. i.,
p. 88. Local var. *Niponensis*.

C. Sumatrensis is distributed, with very little local variation, over the whole Indo-Malayan region—Sumatra, Java, Bali, Ceylon, India, the Philippines, &c. In Japan it reappears in quite a northern locality, on the sea-shore at Niigata, in North-Western Nipon. Compared with the largest Indian specimens I find no difference, except the broader and more robust form (the thorax notably broader), the more obtuse angle described by the median fascia, from which it results that the inner portion of the fascia runs more obliquely towards the suture, and the existence of a minute granule on the anterior edge of each elytral puncture. The females measure $14\frac{1}{2}$ mm., the largest Indian females I have seen $12\frac{1}{2}$ ($5\frac{3}{4}$ lines): Dejean gives 5— $5\frac{1}{2}$ lines as the length of the species as known to him. The remarkable dilatation of the female elytra at one-third the length, and form of the labrum strongly unidentate in the middle, with the front edge straight and slightly oblique from the tooth to the anterior angles, are the same in both forms.

CARABIDÆ.

Omophron æqualis, Morawitz, Beitr. z. Käferf. der Ins.
Jesso, p. 6; Bates, Trans. Ent. Soc. Lond., 1873,
p. 229.

Mr. Lewis has met with this species under two rather distinct forms: in one, from Sapporo, near which place

Morawitz's specimen was derived, of rather larger size, the pale belts of the elytra are reduced in width and more or less interrupted; in the other, from Hiogo, rather smaller, the belts are wider (wider than they generally are in European specimens of *O. limbatum*). In both the sides of the thorax are straighter and the anterior angles longer than in *O. limbatum*.

Elaphrus dauricus, Morawitz, Bull. Acad. St. Petersburg, 1863, p. 239.

One example at Tomakomai, 17th August, 1880.

Nebria Lewisi, Bates, Ent. Mo. Mag. xi. p. 22 (1874).

Kawachi. Abundant under stones at Hakone Lake, and extends north to Morioka; also at Kumamoto.

Nebria Sadona.

Valde elongata, pedibus gracilibus, elytris antice gradatim angustatis sed humeris distinctis obtusis; nigerrima subnitida; capite parvo lævi, collo paullulum constricto; oculis modice convexis; thorace fere sicut in *N. fasciatopunctata* late cordato, angulis posticis retrorsum productis acutis, anticis rotundatis, margine laterali late explanato-reflexo; elytris profunde striatis, striis fundo subtiliter crenatis, interstitiis convexis tertio 4—5 punctato. Long. 14 mm., ♀.

Sado. A male example from Oyayama, of similar size and form, differs in the thorax being more gradually narrowed in front and with more produced fore angles. It is possible it may be the other sex of this species.

Nebria sæviens.

N. Sadonæ affinis. Elongata, subgracilis, nigra, partibus oris, antennis pedibusque (coxis exceptis) fulvofusca; capite fere lævi, collo convexo nullomodo transversim impresso, fronte foveis duabus parum impressis; oculis valde prominentibus; thorace relative magno, elytris vix angustiori, quadrato-cordato antice modice, nec rotundato-, angustato angulis anticis productis (apice obtusis), postice longe, sed parum angustato, subsinuato, angulis posticis retrorsum productis apice acutissimis, margine laterali explanato-reflexo, limbo

toto subrugoso-punctato; elytris lateribus subregulariter modice rotundatis, plica basali parum arcuato, humeris obtusis, apice oblique sinuatis, punctato-striatis interstitiis paullulum convexis, tertio 4-punctato punctis parum conspicuis, sternis utrinque parum profunde punctatis. Long. 11 mm., ♂.

Sado.

I know of no described species at all closely resembling this in form. It comes, perhaps, nearest to *N. Mannerheimi*, Fisch., but is of more slender form, with longer thorax, more gradually narrowed behind, and with broader reflexed margins and much longer hind angles.

Nebria reflexa.

Modice elongata, subgracilis, piceo-nigra, supra leviter iridea, antennis partibus oris pedibus (coxis inclusis) et thoracis elytrorumque marginibus (cum epipleuris) piceo-rufis; capite parvo post oculos sat angustato, collo supra transversim perparum impresso; oculis modice prominentibus; thorace relative magno, quadrato-cordato antice gradatim subrecte angustato, angulis anticis valde productis, postice quam antice multo magis angustato, angulis posticis productis et supra elytrorum basin elevatis, margine laterali late explanato, reflexo, basi punctato; elytris elongato-ovatis versus basin paullo angustatis, plica basali fere recta, angulo humerali obtuso sed distincto, punctulato-striatis, interstitiis vix convexis tertio punctis 4—5. Long. $8\frac{1}{2}$ —9 mm., ♂, ♀.

Iwakisan, under stones, September.

Var. *N. Niohozana*.

Distinctly larger and relatively longer ($10\frac{1}{2}$ mm.); thorax longer, base of antennæ and thighs sometimes darker piceous. Male and female.

Niohozan, under snow, June.

The species has a small head, like *N. Lafrenayei*. The thorax is similar in shape, but broader and more rounded on the sides.

Nebria Japonica.

N. Gyllenhalii affinis sed multo major et magis elongata. Nigra nitida tarsis palpisque picescentibus; capite lævi ante collum perparum transversim impresso

haud foveato, collo convexo, oculis prominentibus. Antennis valde elongatis articulis 5—11 piceo-fuscis; thorace sicut in *N. Gyllenhalii* transversim quadrato-cordato marginibusque punctatis; elytris elongato-oblongis, plica basali arcuata, angulo humerali distincto, punctato-striatis, interstitiis vix convexis tertio 5 punctato; corpore subtus fere lævi. Long. $10\frac{1}{2}$ —11 mm., ♂, ♀.

Iwakisan, abundant.

Appears to differ from all the numerous Siberian species of the *Gyllenhalii* group which have been described. *N. protensa*, Mots. (*anthracina*, Morawitz) seems to approach it most nearly, but, besides being smaller, it differs in the sculpture of the head and elytra.

Nebria chalceola.

Parva, convexiuscula, piceo-nigra elytris obscure viridi-æneis, antennis palpis tibiis et tarsis rufo-piceis; capite lævi postice transversim impresso; oculis magnis convexis; thorace relative magno, quadrato, postice minime angustato, ante medium leviter rotundato, angulis anticis parum productis posticis rectis, margine laterali late explanato-reflexo interdum rufescenti, supra (punctis nonnullis basi exceptis) lævi, polito, foveisque profunde impressis; elytris brevius oblongo-ovatis, striis punctato-crenatis versus latera et apicem evanescentibus, plica basali recta transversa, angulo humerali dentiformi; corpore subtus lævissimo; processu mesosternali minus elevato, supra declivi. Long. $6\frac{1}{2}$ —7 mm., ♂, ♀.

Hakone, Oyama, Niohozan.

A very distinct species. At first sight resembling a small *Pterostichid* much more than a *Nebria*. It is less slender in all its parts than other *Nebriæ*, and the antennæ are distinctly shorter. The elytra are dark bluish green, metallic.

Nebria Snowi.

N. Germari subsimilis, sed oculis magis prominulis elytrisque versus basin minus angustatis, &c. Nigropicea elytris leviter purpurascentibus antennis palpis pedibusque obscure piceis his interdum rufo-piceis; capite lævi postice (medio collo) fovea lineari impresso; oculis valde prominentibus; thorace elytris multo angustiori, relative parvo, quadrato-cordato, postice (prope

basin) fortiter angustato sed parum sinuato angulis posticis acutis anticis subacutis, margine laterali anguste explanato-reflexo, dorso fere lævi; elytris elongato-ovatis versus basin angustatis, plica basali retrorsum obliqua, angulo humerali obtuso sed distincto, striis parum impressis hic illic undulatis indistincte punctulatis, interstitiis vix convexis tertio punctis 5. Long. $10\frac{1}{2}$ mm., ♂, ♀.

Ketoi, one of the Kuriles, under stones (*Mr. Snow*).

The punctures on the third interstice are continued as transverse impressions across the interstice. The thorax differs from that of *N. Germari* in being less rounded anteriorly, less sinuated at the posterior constriction (the acute hind angles standing out in consequence much less), and in the lateral margins being broader and much more reflexed.

Nebria jamata, Motschulsky, Bull. Mosc. 1865, iv. p. 281.

North Japan; Kurile Is.

This species is classed by its author in his *brevicollis* group, and therefore cannot have anything in common with the *N. Snowi* above described. I have not seen any insect answering to the description.

Leistus crassus.

L. spinibarbi paullo major et multo convexior, subæneoniger, nitidus; antennis partibus oris pedibusque testaceo-rufis; capite ruguloso-punctato, media fronte læviori ibique fovea elongata, collo sulcato-constricto, labro medio haud producto, mandibulis longe productis; thorace latissimo, disco excepto grosse punctato, medio valde dilatato-rotundato, postice contracto et rectilaterali, angulis rectis, marginibus sat late explanatis; elytris oblongis, mox pone humeros latioribus, postea paullulum angustioribus, sat grosse punctato-striatis, prosterno toto, pectoris ventrisque (ad basin) lateribus grosse punctatis. Long. $9\frac{1}{2}$ —10 mm.

Rakuwayama, near Hitoyoshi.

Much more convex and robust than any other species known to me; black, with a slight brassy or purplish tinge.

Leistus alecto.

L. laticollis (Mor.), Putzeys, Ann. Soc. Ent. Belg. 1875 ?

L. piceo quoad formam haud dissimilis, sed elytris versus basin minus angustatis; *L. laticolli* (Moraw.) affinissimus, differt solum elytris paullo longioribus et postice magis dilatatis, colore obscuriori subæneo-tincto. Elongatus, gracilis, piceo-niger subæneo-tinctus; antennis (articulis 1- vel 1—4 leviter infuscatis) partibus oris tibiis et tarsis testaceo-fulvis; capite convexo, lævi, collo sulcato-constricto; thorace minus lato, subrotundato, lateribus postice ante angulum rectis, margine antice et postice plus minusve punctato; elytris elongato-ovatis ab ultra medium usque ad basin gradatim angustatis sed humeris magis quam in *L. piceo* perspicuis, sat profunde punctulato-striatis, striis versus latera et apicem evanescentibus; prosterno medio pectoreque lateribus sparsim grosse punctatis. Long 9—9½ mm., ♂, ♀.

Sapporo; Nikko.

The tendency of the striæ on the sides and the apex to become more feebly impressed or to disappear altogether is common to this species and to a distinct East Siberian one, four examples of which I obtained from the Maack collection, and which agree very well with *L. laticollis*, Mor.

Leistus prolongatus.

Valde elongatus, antennis (articulis 1—4 infuscatis) partibusque oris fulvo-testaceis, tibiis et tarsis rufopiceis, palpis maxillaribus apice intus guttula nigra; capite quam in *L. spinibarbi* longiori, oculis minus prominentibus, mandibulis maxillisque multo magis elongatis, vertice valde convexo collo constricto; thorace subovato, antice modice rotundato postice gradatim usque ad angulos posticos obtusos (fere rotundatos) angustato, basi tantum punctato; elytris maxime elongatis, angustis, postice convexis, medio subparallelis, prope basin gradatim angustatis, basi (apud plicam) angustis, humeris nullis, punctato-striatis, interstitiis sat convexis. Long. 10½ mm., ♂.

Oguma, in Higo. One example in May.

Distinguished from all *Leisti* known to me, except the two following, by the form of the thorax, the lateral margin not straightening to form the usual rectangular hind angles. This form of thorax appears to occur also in *L. caucasicus*, a species which I have not seen. *C. rotundicollis*, Motsch., may possibly be similar, but the author does not describe the hind angles.

Leistus obtusicollis.

L. prolongato proxime affinis sed minus elongatus; *L. piceo* similis et differt precipue statura majori thoracisque angulis posticis obtusis. Piceo-niger, partibus oris (palpis totis) antennis (scapo solum infuscato) tibiis et tarsis testaceo-fulvis; capite supra convexo, collo constricto, mandibulis longe ultra labrum prolongatis; thorace fere sicut in *L. piceo*, subovato, postice subrecte usque ad angulos obtusos angustato, marginibus anticis et posticis ruguloso-punctatis; elytris modice convexis, elongato-ovatis, antice angustatis, ad basin angustissimis, punctato-striatis, interstitiis sat convexis; sternis abdominisque basi utrinque grosse punctatis. Long. $9\frac{1}{2}$ mm., ♂, ♀.

Hakone, in May; in moss on the trunks of *Cryptomeria* at Gongensama Temple.

Besides the rather smaller size and the more widely spread punctuation of the thorax, this species differs from *C. prolongatus* in the decidedly shorter and relatively broader and less parallel-sided elytra. In *L. obtusicollis* the elytra have rounded sides, and are narrowed from behind the middle to the base; elytral shoulders there are none, though the very oblique basal plica joins the margin at a distinct angle.

Leistus subæneus.

L. prolongato et *L. obtusicolli* affinis, sed elytris brevioribus et latius ovatis; niger supra obscure olivaceo-æneus nitidus, antennis (articulis 1—4 plus minusve infuscatis) partibusque oris fulvo-testaceis, tibiis et tarsis rufo-piceis; capite et thorace sicut in *C. obtusicolli*, sed hoc antice et postice obsolete punctato, postice usque ad angulos subrecte angustato, angulis pedunculo arcte adhærentibus obtusis; elytris brevius ovatis, paullo ante

apicem latis, deinde usque ad basin subrotundatim angustatis, ad basin angustissimis, olivaceo-æneis punctato-striatis, interstitiis sat convexis. Long. $8\frac{1}{4}$ — $8\frac{1}{2}$ mm.

Nikkô, under moss in forests at high elevations, in early summer.

Carabus granulatus (Lin.), var. *telluris*, Lewis, Trans. Ent. Soc. Lond., 1882, p. 526.

C. granulato quoad formam simillimus; a typo differt thorace creberrime vermiculato-rugoso et punctato elytrisque inter interstitia catenata costa unica nitida. Niger obscure viridi vel cupreo-tinctus, parum nitidus. Long. 23 mm.

Tonosawa, Central Japan.

Neither this nor the following species or local subspecies is the *C. Maacki*, Morawitz, as Mr. Lewis at first thought (*loc. cit.*). *C. Maacki* is said by Motschulsky to be an East Siberian variety of *C. conciliator*, a species well distinguished from *C. granulatus* by the scale-like minute sculpture of the elytra. In *C. telluris* the elytral interstices are thickly covered with small separate granulations, more distinct from each other than in the typical *C. granulatus*, and this does not agree with Morawitz's description, "interstitiis rugulosis et granulatis." The tubercles of the "chain-striæ" are shorter than is usual in the European *C. granulatus*, resembling in this respect the ordinary varieties of the species so abundant in East Siberia.

Carabus Yezoensis.

C. granulato affinis sed differt elytris magis convexis et ovatis; viridescenti-niger, opacus; capite et thorace creberrime vermiculato-rugosis, hoc sicut in *C. granulato* sed postice (mox ante basin) fortius sinuato-angustato; elytris elongato-ovatis, lateribus in utroque sexu rotundatis, inter interstitia catenata tricostulatis, costulis fere æqualibus rugulosis, mediana tantum hic illic lævi, interstitiis crebre asperato-granulatis; apice sicut in *C. granulato* sat profunde sinuatis. Long. 26 mm., ♂, ♀.

Sapporo, and across to Junsai Lake.

Although belonging to the *granulatus* group, this species differs too much in form and sculpture to be treated as a simple local form of *C. granulatus*. Its facies is

entirely different, owing to its more ovate and convex elytra, its opaque surface, and minute sculpture; the short tubercles of the chain-striæ and some parts of the median raised lines alone being smooth. It is probably the *C. granulatus* var. of Yezo described by Morawitz as elytra "mit drei rauhen flachen Längsrippen."

Carabus Van Volxemi, Putzeys.

Putzeys, Ann. Soc. Ent. Belg., xviii. (1875), p. 2.

Chiuzenji, Suyama, Wada-togé. Island of Sado.

Like all other species of this genus, *C. Van Volxemi* varies in sculpture and in form. At Awomori a variety occurs in which the tubercles of the chain-striæ are broader than in the type.

Carabus conciliator, Fischer.

Fischer, Ent. Russ., i., p. 102; pl. 10, fig. 25; Dej., Sp. Gen., v., p. 542.

Sapporo and Cape Soya; two examples, not differing from others from Lake Baikal.

Carabus Mæander, Fischer.

Fischer, Ent. Russ., i., p. 103; Dej., Sp. Gen., ii., p. 486.

Sapporo; two examples, differing from East Siberian specimens only in the elytral tubercles being much narrower and less ovate in shape.

Carabus aquatilis.

C. clathrato affinis; major, multo magis elongatus. Oblongo-elongatus supra nigro-æneus (elytris precipue fœm. subopacis); capite thoraceque nitidis, illo relative parvo, sparsim punctato, juxta oculos convexos multistrigoso, hoc sat elongato antice gradatim (vix arcuatim) angustato, versus basin breviter sinuato, basi dilatato, angulis posticis perparum retrorsum et extrorsum productis, basi utrinque late haud profunde sinuato, marginibus lateralibus reflexis, margine ipse incrassato; elytris maxime elongato-oblongis, apice sinuatis, utrinque costis tribus angustis valde elevatis, interstitiis late con-

cavis, subtiliter granulatis, singulo serie tuberculorum angustorum foveolis vix impressis et haud metallicis separata; subtus nigro, lævi polito. Long. 30—34 mm., ♂, ♀.

Shimonosuwa Lake. Taken plentifully by pressing down the aquatic weeds floating round the margin of the lake.

A fine and well-marked species, nearest allied to *C. clathratus*, but different in shape and wanting the metallic foveæ of the elytra. The tubercles in the broad furrows are always narrow, and are sometimes scarcely elevated or perceptible.

Carabus procerulus, Chaudoir.

Chaudoir, Rev. & Mag. Zool., 1862, p. 486.

Yokohama. Elevated forests in Central Japan, Chiu-zenji, Morioka, Awomori. Winters under bark, and in summer comes freely to sugar. Also one specimen on Oyayama in Kiushiu.

Mr. Lewis in his notes distinguishes as a separate form the Yokohama specimens (of which he has only three) and those from the other localities above mentioned. The only difference I can detect is a slight modification in the outline of the thorax; the Yokohama form being less cordate, *i. e.*, the sides are more gradually rounded immediately behind the anterior angles and less contracted behind. This difference, however, is not constant, and specimens from distant localities are as nearly as possible identical in form of thorax. The females vary in the more or less elongate-ovate form of the elytra.

Carabus arboreus, Lewis.

Lewis, Trans. Ent. Soc. Lond., 1882, p. 526.

Paullo minus elongatus, fuligineo-niger opacus; thorace quam in *C. procerulo* breviori ante medium magis rotundato-dilatato angulisque posticis minus elongatis vix retrorsum productis; elytris quoad sculpturam simillimis, sed minus prolongatis, fœm. ovatis; segmentis ventralibus sine sulculo basali. Long. 27—32 mm., ♂, ♀.

Sapporo, Bibi, and Junsai; Yezo. In damp forests under bark and logs.

Of quite different facies from the long and narrow type-form of *C. procerulus* from Yokohama, but nevertheless linked with it by intermediate varieties found in intermediate latitudes. It is relatively shorter and especially in the female more ovate than *C. procerulus*, and the thorax is slightly more rotundate-dilated anteriorly and more contracted posteriorly. In all examples of *C. procerulus* there is a fine arcuated transverse groove across the basal part of the ventral segments, of which there are scarcely any traces in *C. arboreus*.

Carabus exilis.

C. procerulo proxime affinis sed multo minor et adhuc gracilior. Valde angustatus, fuliginosus opacus; capite coriaceo; thorace elongato, subcordato-quadrato, antice modice rotundato et postice parum sinuato-constricto, angulis posticis sat productis, dorso creberrime ruguloso-punctulato, rugulis transversis nec vermiculatis; elytris angustis, parallelis (fœm. lateribus paullo rotundatis) apice fere integris (ad suturam subprolongatis), dorso utrinque striis catenatis 3, lineis elevatis 3 alternatis, omnibus angustis et granulatis, subnitidis, interstitiis depressis opacis haud punctatis minute granulatis; subtus sulculis ventralibus obsoletis. Long. 20—24 mm., ♂, ♀.

Island of Sado.

To all appearance a dwarf form of *C. procerulus*; but, besides its exceedingly slender (and in the male parallel-sided) form, it differs distinctly in sculpture, the three raised lines between the chain-striæ being uninterrupted, and the striæ proper or depressed interstices between the raised lines being opaque, with a few granules. In its typical state *C. exilis* appears to occur only in the Island of Sado. There are scarcely any traces of impressed punctures in the striæ proper.

Carabus tenuiformis.

C. exili proxime affinis et similis sed differt elytris punctato-striatis. Long. 21—23 mm., ♂, ♀.

Niohozan and Chiuzenji.

There is scarcely any difference in form between this and *C. exilis*, but the striæ (or depressed interstices of

the raised lines) have throughout a range of conspicuous punctures. The three raised lines between the chain-striæ are continuous and crested with shining granules, as in *C. exilis*, and the elytra in the male are narrow and nearly parallel, as in that species. The thorax varies as usual in the degree of dilatation in front, but it is always elongated, as in *C. procerulus* type, and in some examples very gradually narrowed (with little curvature) from near the middle to the anterior angles.

Carabus gracillimus.

C. exili affinis et similis, sed differt elytris (mas) haud parallelis, ab humeris usque prope apicem gradatim dilatatis. Gracillimus, fusco-piceus opacus (individuis maturis leviter ænescens); thorace relative minori et angustiori subcordato-quadrato; elytris sicut in *C. tenuiformi* punctato-striatis, stria-catenata conspicuori (tuberculis elongatis validioribus) sed costulis tribus irregularibus, multo minus elevatis, mediana excepta hic illic obsoletis. Long. 20—21 mm. ♂, ♀.

On the summit of Ontake end of July, when snow still remained in patches.

Differs at first sight from both the preceding in the less parallel outline of the elytra, especially of the male; the sculpture also differs in the fine raised lines being less elevated and sharply defined.

Carabus Fujisanus.

C. exili similis, differt tantum statura majori, elytrorum costulis triplicibus minime elevatis interdum obsoletis. Elongatus, gracilis, elytris sicut in *C. exili* postice perparum ampliatis; fuligineus opacus; thorace elongato angusto, antice vix rotundato, versus apicem gradatim angustato, postice sinuatim constricto. Long. 22—25 mm., ♂, ♀.

Subashiri, near Fujisan.

This form comes a little nearer *C. exilis* than either of the two preceding; but the sculpture of the elytra, especially in the female, recedes very considerably from the Sado species. The triple raised lines are obtuse, scarcely elevated (sometimes scarcely distinguishable), and the granulations, spread over the whole elytra, do

not form such regular rows on the summits of the lines; the depressed interstices or striæ have perceptible punctures. A remarkable feature in the thorax of the female is that the flanks are visible, in the middle on both sides, when the insect is viewed from above. As in *C. exilis*, and to a less degree in the allied forms, there is a submarginal shining streak extending for a short distance from the shoulders of the elytra.

The four preceding are without doubt no other than so many local forms of one species, but it would be difficult to frame a description to fit the whole, and if they were treated as one there would be no valid reason for not including *C. procerulus* and its cognate forms with them.

Carabus porrecticollis.

Valde elongatus et angustus, supra fere opacus, niger, capite thoraceque violaceis; capite postice (cum collo) punctato, oculis valde prominentibus, collo angusto; thorace valde elongato, lateribus perparum arcuatis, a medio usque ad apicem gradatim et paullo angustato, postice adhuc minus et subrecte angustato; angulis posticis sat productis (apice obtusis) margine basali recto, dorso sat crebre ruguloso-punctulato; elytris sicut in *C. procerulo* apice perparum sinuatis; mas elongato-oblongis, fœm. elongato-ovatis, dorso striis catenatis tribus et inter has lineis tenuissimis elevatis tribus, (interspatio suturali duabus tantum) interstitiis depressis subcancellato-punctatis, lineis et interstitiis granulatis; ventris segmentis basi arcuatim acute sulcatis. Long. 28—30 mm., ♂, ♀.

Urasa, and on the north-west coast at Akita and Sakata; a local species.

Undoubtedly belonging to the *procerulus* group, but distinguished by its long thorax, with scarcely rounded or flexuous sides, as well as by its colour and the sculpture of the elytra. The tubercles of the chain-striæ are sometimes narrow and linear, almost as in *C. procerulus*, and sometimes much broader. The fine triple elevated lines vary in elevation, the middle one of the three respectively sometimes being alone elevated, and all are crested with granulations. The depressed intervals or striæ have each a row of large impressions mostly extending quite across the interval.

Carabus opaculus, Putzeys.

Putzeys, Ann. Soc. Ent. Belg., xviii. (1875), p. 2.

South Yezo; Sapporo, Bibi, and Junsai Lake; in damp forests.

Belongs also to the *procerulus* series, but developed in a contrary direction from *C. exilis* and allies, its form being relatively short, compact, and rounded.

Carabus Dehaanii, Chaudoir.

Chaudoir, Bull. Mosc., 1848., iv., p. 452; *C. japonicus*, Thomson, Opusc. Ent., fasc. vii., p. 728.

Confined to the warm area south of the Biwa Lake; abundant and constant in form and colour from Kago-shima to Kyoto, a distance of 400 miles; and occurs also in Tsushima and in the south of Korea.

Carabus insulicola, Chaudoir.

Chaudoir, Rev. & Mag. Zool., 1869; *C. Kaempferi*, Thoms., l. c.

From Biwa Lake to Awomori, an extent of 500 miles.

Carabus Yaconinus, Bates.

Bates, Trans. Ent. Soc. Lond., 1873, p. 231.

An offshoot from *Dehaanii*, existing only in that part of Japan where the parent type is abundant (*G. Lewis*).

Carabus Albrechti, Morawitz.

Morawitz, Bull. Acad. St. Petersburg., 1863, p. 321. Syn. vide Bates, Trans. Ent. Soc. Lond., 1873, p. 234.

Spread over all the islands, a space of 1300 miles.

Mr. Lewis obtained a handsome variety of this species, one male at Suyama (base of Fujisan), and one female at Sawara, the whole upper surface of which is of a golden-coppery colour (the epipleuræ and prothoracic episternum also metallic), and the striæ conspicuously crenated. The inner edge of the male fore tibiæ is distinctly angulated, as in *C. maiyasanus*, not obtusely prominent, as in the typical *C. Albrechti*.

Carabus Maiyasanus, Bates.

Bates, Trans. Ent. Soc. Lond., 1873, p. 232; Lewis, Trans. Ent. Soc. Lond., 1882 p. 526.

Limited to a comparatively small area, and then occurring only at considerable elevations. The headquarters of it are in the Idzu Province, but Mr. Lewis has specimens from Oyayama, near Kumamoto, in Kiushiu.

It is agreed to be a mountain variety of the southern form of *C. Albrechti*.

Var. Minor et angustior. Long. 20 mm.

Hakone.

Carabus Gehinii, Fairmaire (var. *C. grandis*, Pl. XIII., fig. 3).

Fairmaire, Petites Nouvelles Entom., vol. ii., p. 37 (1876); Waterhouse, Aid to Identif. of Ins., part 16 (Jan., 1883).

A male example obtained at Sapporo, Yezo, is figured by Waterhouse as above cited; a large female, also obtained by Mr. Lewis, differs from the male in its broader thorax, and the raised elytral striæ being interrupted by punctures. This he has provisionally named *C. grandis*.

Carabus tuberculatus, Fischer and authors.

Occurs on the mountains in S. Japan, and is common in the streets of Sapporo, nearly at sea-level.

This species, already recorded from Japan, I here add simply to complete the enumeration of the species now known from Japan of the genus *Carabus*. They are now twenty-one in number.

Damaster blaptoides, Koll.

According to Mr. Lewis, in the excellent account he has given of the distribution of the species of *Damaster* (in Ent. Mo. Mag., vol. xvii., 1880, p. 159), *D. blaptoides* is confined to Kiushiu, in Southern Japan.

Var. *Lewisi*, Rye.

On Shimabara, near Nagasaki, and at Hiogo; a half-starved form, so to speak, of *D. blaptoides* (*G. Lewis*).

Damaster pandurus, Bates.

Yokohama and S. E. Japan.

Var. *cyanostola*, Lewis.

Lewis, Trans. Ent. Soc. Lond., 1882, p. 524; *pandurus* var., Ent. Mo. Mag., xvii., 1880, p. 60.

Rather more slender in form than the *D. pandurus* of the vicinity of Yokohama, and with a more distinct blue tinge; the thorax of richer blue colour.

Mountains of Chiuzenji, lat. 36° 30'.

Damaster Fortunei, Adams.

Adams, Ann. & Mag. Nat. Hist., 1861, p. 59; Bates, Trans. Ent. Soc. Lond., 1873, p. 230; Lewis, Trans. Ent. Soc. Lond., 1882, p. 524. *D. viridipennis*, Lewis, Ent. Mo. Mag., xvii. (1880), p. 161.

Awa-Sima, Tabu-Sima (*Adams*); Akita, Awomori, and Ichinohe (*Lewis*).

Allied to *D. rugipennis* more nearly than to *D. pandurus*, having three dilated joints with brush-soles in the male fore tarsi. Mr. Lewis is convinced that his *D. viridipennis* is the same as *D. Fortunei*.

Damaster rugipennis, Motsch.

Motsch., Etud. Entom., x., p. 6; *D. auricollis*, C. Waterhouse, Trans. Ent. Soc. Lond., ser. 3, v., p. 569.

Yezo, from Hakodate to Cape Soya in the extreme north.

Damaster capito, Lewis.

Lewis, Ent. Mo. Mag., xvii. (1881), p. 197.

Island of Sado; not obtained on the second visit in 1881.

Differs from all other described species by its more compact form, broader and shorter both in trunk and limbs; also by the total absence of mucrones, the apex of the elytra being formed very similarly to that of *Carabus procerulus*.

Calosoma Maximowiczi, Morawitz.

Morawitz, Beitr. z. Käferfauna Ins. Jesso, p. 20 ;
C. mikado, Bates, Trans. Ent. Soc. Lond., 1873, p. 235.

Foot of the Komanotake ; taken in abundance by shaking young oak trees.

Calosoma Chinense, Kirby.

Kirby, Linn. Trans., xii., 1818, p. 379.

Sapporo, Yezo. Two examples obtained by Mr. Adachi, a native collector.

Cychnus convexus, Morawitz.

Morawitz, Beitr. z. Käferfauna Ins. Jesso, p. 7.

Hakodate and Sapporo. Taken feeding on *Helix pauper* (Gould).

Dyschirius Yezoensis.

D. polito simillimus, sed differt thorace magis ovato postice et antice fere æqualiter angustato. Supra æneonitidus, scapo rufo, pedibus rufo-piceis, femoribus anticis submetallicis ; elytris minus cylindricis, elongato-subovatis, profundius quam in *D. polito* (sed minus profundis quam in *D. impunctipenni*), striatis, striis (versus apicem exceptis) crenato-punctatis, lateraliter et ante apicem interdum evanescentibus sed juxta apicem 1ma et 2nda 7ma et 8va semper profunde insculptis. Long. $4\frac{1}{2}$ mm.

Yezo ; Hakodate and Sapporo.

Belongs to the same group as the European *D. politus*, and offers no perceptible difference in the form of head, anterior tibiæ, &c. But the thorax, especially when viewed from the front, is seen to be distinctly more ovate and less trapezoidal, the greatest width being nearly in the middle. The elytra also are conspicuously less cylindrical, being rounded on the sides, more strongly so a little behind the shoulders. In its normal state the colour is bright brassy, but individuals occur of a dull purpurascient pitchy hue, sometimes reddish at the tips of the elytra.

The species is similar to *D. cheloscelis* from South

Japan, which has, however, a much wider thorax, rufous antennæ, &c.

D. stenoderus, Putzeys (Ann. Soc. Ent. Belg., 1873) from Shanghai, seems to be a nearly-allied species, but rather larger, 5 mm.

Dyschirius glypturus.

D. Yezoense simillimus, sed multo minor, tibiis anticis denticulo inferiori-exteriori distincto, etc. Obscurius æneus, politus, scapo calcaribus tarsisque anticis testaceo-rufis, pedibus piceo-rufis (femoribus anticis obscurioribus) palpis nigris; mandibulis angustis (extus haud dilatatis) acutissimis; thorace ovato nec subtrapezoidali; elytris sicut in *D. Yezoense* elongato-ovatis sed striis parum impressis conspicue (versus apicem exceptis) punctatis, juxta apicem 7ma et 8va oblique æqualiter profunde inculptis. Long. $3\frac{1}{2}$ mm.

Hakodate, on the sand-hills.

Similar to *D. Yezoensis* in outline of thorax and elytra, but of darker brassy hue, and distinguishable by the acute external denticulation of the anterior tibiæ at the base of the terminal spine, which latter is curved, and is equal in length to the spur, both, as well as the tarsi, being pale red. The mandibles are narrow. The elytra are sculptured at the apex, similarly to those of *D. Yezoensis*, *politus*, and allies, but the 7th and 8th striæ are relatively much more deeply and equally impressed, and run obliquely for a longer distance, and are the more distinct as the ninth interval is more tumid at the apex, making the latter appear broadly obtuse.

Broscosoma elegans. (Pl. XIII., fig. 7).

Valde convexum; politissimum, antennis partibus oris pedibusque piceo-fulvis; elytris breviter ovatis (humeris nullis) valde punctato-striatis. Long. $8\frac{1}{4}$ —9 mm., ♂, ♀.

Niohozan and Nantaizan, at 7000 to 8000 feet elevation.

This elegant and curious Carabid is distinguished from the only others known of the genus (*B. Baldense* and *B. Ribbei*), by the ovate, almost gibbous, deeply punctate-striate elytra. The facies is rather that of *Disphæricus*

than of *Broscosoma*, but it undoubtedly belongs to the latter genus. The head is similar in form to that of *B. Baldense*, but it is smooth and polished, with the two furrows on each side over the base of the antennæ more clearly marked, and the mandibles and palpi more elongated and porrected. The antennæ are much thinner, and the fine pubescence does not begin before the 4th joint. The thorax is globose-ovate and highly polished, equally narrowed behind and before; the base forms a thickened scabrous ring, separated from the convex disk by a groove, the clavate femora contrasting strongly with the slender tibiæ and tarsi. The legs are long and slender, and the three dilated joints of the male anterior tarsi are slender oblong-quadrate, clothed beneath with fine hairs.

Panagæus japonicus, Chaudoir.

Chaudoir, Bull. Mosc., 1861, ii., p. 356; *P. rubripes*, Moraw.

Very abundant at Hakone and Miyanoshita in moss and rotten stumps of trees, and in similar places as far north as Sapporo.

Panagæus robustus, Morawitz.

Morawitz, Bull. Acad. St. Petersb., 1863, p. 323.

Yezo; Junsai, Sapporo, and Shiraoi.

A var. (*niponensis*) of much smaller size occurs in the plains of Fujisan measuring $9\frac{1}{2}$ mm., the Yezo form being 11—12 lines long.

Panagæus singularis, Bates, Trans. Ent. Soc. Lond., 1873, p. 245, forms the type of the new genus *Tinoderus*, Chaudoir, Monographie s. l. Panagéides, p. 75.

Peronomerus fumatus, Schaum.

Schaum., Ann. Soc. Ent. Fr., 1853, p. 440; *P. æratus*, Chaud., Bull. Mosc., 1861, p. 354; *id.*, Monogr. s. l. Panagéides (1878), p. 82.

One specimen of this Chinese species was obtained by Mr. Lewis at Ogura Lake.

Peronomerus nigrinus, Bates.

Bates, Trans. Ent. Soc. Lond., 1873, p. 245.

Entirely confined to dry elevated slopes at Nagasaki and near Kioto, and distinct from *P. fumatus*, Lewis.

Peronomerus auripilis.

P. fumato proxime affinis sed differt statura majori, præcipue longiori, thoraceque relative angustiori, antice longius rectiusque angustato, medio fortius angulato et producto, postice valde sinuato angulis posticis productis dentiformibus. Elongato-ovatus, viridescenti-æneus pube erecte fulvo-aurato dense vestitus; antennis piceis, articulo basali palpis pedibusque fulvo-testaceis. Long. $9\frac{1}{2}$ mm., ♂, ♀.

Marshes, Ogura Lake; Uyeno and Honjo, in Tokio. Rare.

Rather larger than Canton examples of *P. fumatus*; nearly the same in colours, sculpture, and clothing, but differing in its slightly more elongate form, especially that of the thorax, which is much narrower, and is more lengthened anteriorly from the very prominent lateral angle to the head.

Chlænius prostenus, Bates.

Bates, Trans. Ent. Soc. Lond., 1873, p. 325.

Margins of the Ogura Lake, near Kioto.

Previously known only from Kiu-Kiang, on the Yangtsze, China.

Anisodactylus tricuspidatus, Morawitz.

Morawitz, Beitr. z. Käferfauna Ins. Jesso, p. 66.

In addition to Hiogo, previously recorded, Subashiri, Niigata.

Ophonus constrictus.

Harpalo lævicolli haud dissimilis; major, piceo-niger nitidus, antennis palpis pedibusque testaceo-rufis; supra toto sparsim subtiliter punctatus, thorace basi densius et grossius subconfluentem punctato; capite fere ut in *Harpalo fuliginoso* magno, post oculos tumidulo, foveis frontalibus profundis rugosis, extus obliquis sed versus

oculum haud lineam impressam emittentibus; thorace late cordato, antice valde rotundato ante basin constricto, angulis posticis rectis, fovea utrinque basali lineari; elytris relative brevibus, sat convexis, apice oblique sinuatis, profunde subpunctulato-striatis, interstitiis paullo convexis 3io impunctato; tarsis supra pilosis. Long. 10 mm., ♂.

Oyayama, near Kumamoto. One example only in March.

Not much resembling any *Ophonus* known to me; but comes nearest *O. cordatus*, differing, however, in the much scantier punctuation. It resembles most *Harpalus leptopus* and *congruus*, but has not the oblique line of the forehead connecting the frontal fovea with the orbit, as in those species.

Harpalus vicarius, Harold.

Harold, Deutsche Ent. Zeitschr., 1878, p. 66.

Von Harold gives this name to the Japanese form of *H. ruficornis* mentioned by Morawitz and myself as having obtuse hind angles to the thorax. Among five East Siberian examples I find nearly all the intermediate gradations between *vicarius* and *rufescens*, but none with hind angles so rectangular as in the European form. Some males of *vicarius*, with smooth disc of thorax, again connect the species with *H. griseus*.

Harpalus tridens, Morawitz.

Morawitz, Beitr. z. Käferfauna Ins. Jesso, p. 69.

Hakodate and Niigata; Hagi (Miller).

Closely allied to *H. rugicollis*, Motschulsky, and also to the European *H. calceatus*. The extent of punctuation and pubescence on the sides and apex of the elytra varies. In one of Mr. Lewis' examples the whole elytra, with the exception of the sutural interstice, is punctured.

Harpalus rugicollis, Motsch.

Motsch., Etud. Ent., x., p. 5; Harold, Abhandl. Nat. Ver. Bremen, iv., 1875, p. 285. *H. japonicus*, Morawitz, Beitr. z. Käferfauna Ins. Jesso, p. 69; Bates, Trans. Ent. Soc. Lond., 1873, p. 261.

Von Harold identified this species from a type-specimen received from Motschulsky himself, and a small

example of *H. japonicus*, which I sent to Baron Chaudoir, was returned by him as "*H. rugicollis*, Mots., comparé à un type." Notwithstanding, therefore, the insufficiency of Motschulsky's description, there is no longer room for doubting that the species formerly determined by me as *japonicus* is the same as *rugicollis*.

Harpalus congruus, Motschulsky.

Motschulsky, Bull. Mosc., 1866, i., p. 164.

H. lævicollis, Morawitz, Beitr. z. Käferfauna Ins. Jesso, p. 71 (nec Dufts.); Bates, Trans. Ent. Soc. Lond., 1873, p. 261.

Tachycellus falsus, Bates, Trans. Ent. Soc. Lond., 1876, p. 3.

T. congruus, Harold, Deutsche Ent. Zeitschr., 1877, p. 338.

Appears to be generally distributed throughout Japan. Von Harold had reason in doubting that the species belonged to *Tachycellus*: on examining the penultimate joint of the labial palpi I find that it is multisetose, like all the true *Harpalinae*, and not bisetose, as in the *Stenolophinae*, to which *Tachycellus* belongs. It remains to be decided whether the fine oblique impressed line on each side of the forehead, extending from the frontal fovea to the eye, is a character of sufficient importance to separate the species generically from *Harpalus*. Many of the smaller species of *Ophonus* present traces of the same character, and in *Harpalus lævicollis*, which *H. congruus* so closely resembles, it appears to be present in some examples and absent in others.

Harpalus leptopus.

H. congruo proxime affinis sed major, antennis pedibusque longioribus. Elongato-oblongo-ovatus, piceus, ænescens vel cuprascens, politus, antennis partibus oris pedibusque testaceo-rufis; thorace quadrato-cordato, antice rotundato postice longe sinuatim angustato, angulis posticis acutis, margine basali medio recto, versus angulum utrinque retrorsum obliquo, supra punctulato-rugosis disco lævi, fovea elongata modice impressa; elytris apice oblique sinuatis, acute striatis, interstitiis

modice convexis 3io unipunctato, corpore subtus lævi. Long. $9\frac{1}{2}$ —10 mm., ♂, ♀.

Nikko, borders of the snow; Nakano toge, Koyebori.

The head, as in *H. congruus*, is smooth, with a fine oblique impressed line from the frontal fovea on each side to the eye. The thorax is relatively longer and moderately narrowed and sinuated behind, and the hind angles strongly acute.

Harpalus discrepans, Morawitz.

Morawitz, Beitr. z. Käferfauna Ins. Jesso, p. 70.

Niigata, Hakodate, Bukenji, and Yokohama.

Variat; pedibus fulvo-testaceis tibiis plus minusve infuscatis.

Motschulsky (Bull. Mosc., 1863, iv., p. 214) says this species is his *H. (Pheuginus) corporosus*. This must either be a mistake or Motschulsky has given a false description of his *H. corporosus*, for he says of the elytra, "subtiliter crenato-vel cancellato-punctatis," which does not apply to *H. discrepans*, but suits very well the following species found in the same localities:—

Harpalus corporosus, Motschulsky.

Motschulsky, Etud. Ent., x., 1861, p. 3; *H. zabroides*, Dejean, var.; Morawitz, Beitr. z. Käferfauna Ins. Jesso, p. 71.

Sapporo, Shiraoi, Awomori.

A large robust species, varying in size from 11 mm. to 15 mm. Morawitz, who had only one example before him (taken at Hakodate), mentions the crenated striæ as the only character distinguishing it from the European *H. zabroides*. He might have added the punctured base of the thorax, which is constant in all the numerous examples I have seen.

Harpalus chlorizans.

H. zabroidi et *H. corporoso* affinis sed differt thorace postice rotundato-angustato, angulis posticis apice rotundatis. Oblongus, crassus, niger, thorace basi marginæque elytrisque olivaceo-æneis, palpis apice tantum

rufis, antennis pedibusque (tarsis inclusis) nigro-piceis; thorace valde transverso, lateribus fere regulariter et leviter arcuatis, basi et margine laterali crebre ruguloso-punctulatis; elytris (mas) valde convexis apice oblique sinuatis, crenato-striatis interstitiis planis. Long. $12\frac{1}{2}$ mm., ♂.

Yokohama; one example.

This is apparently only a local or colour-variety of a species not uncommon in Eastern China and Korea, which is generally of a deep black colour.*

Harpalus fuliginosus, Dufts.

Dufts., Morawitz, Beitr. z. Käferfauna Ins. Jesso, p. 71.

Near the snow on Niohozan.

Morawitz's specimens were from the Komanotake. Mr. Lewis' specimens agree very well with the European form; von Harold appears to have been wrong in referring the species determined by Morawitz to *H. flavitarsis*.

Harpalus flavitarsis, Dejean.

Dejean, Sp. Gen., iv., 378; Harold, Deutsche Ent. Zeitschr., 1878, p. 66.

Tokio (*Hilgendorf*).

An example from Junsai (var. *niponensis*) agrees with the description, except in its much larger size, $4\frac{1}{2}$ lin., the European *H. flavitarsis* being $2\frac{1}{2}$ —3 lin.

Harpalus variipes.

H. anxio et *Frolichii* similis. Differt corpore angustiori, thoracisque lateribus fere regulariter arcuatis. Subanguste oblongo-ovatus, piceo-niger, elytris æneotinctis, antennis palpis tibiis et tarsis melleo-fulvis, tibiis 4 posticis apice infuscatis. Capite parvo, lævi, foveis frontalibus punctiformibus; thorace elytris haud angustiori, lateribus arcuatis antice paullo citius quam postice

* It is apparently undescribed:—*Harpalus crates*: *H. chloriganti* quoad formam et sculpturam simillimus; oblongus, crassus, sat convexus, niger nitidus, interdum leviter æneo tinctus; thorace valde transverso lateribus fere regulariter et leviter arcuatis, basi subconfluentibus grosse punctato; elytris profunde crenato-striatis. Long. 12—13 mm. Korea; Kiu-Kiang; Hong-Kong.

angustato, angulis posticis obtusis subrotundatis, fovea utrinque basali oblonga parce punctata, marginibus lateralibus rufescentibus; elytris apice parum oblique sinuatis, acute subpunctulatim striatis, interstitiis subplanis, tertio impunctato. Long. $7\frac{1}{2}$ mm., ♂, ♀.

Yokohama, on the beach; common in March at Honmoku.

It is with great hesitation I venture to describe this species as new; it approaches so closely several of the smaller European species, with all of which I have been able to compare it, except with *H. flavicornis*. The form of the thorax, however, seems to be different from that of all the species alluded to, the sides being arcuated, without trace of straightening towards the hind angles, and the curvature being notably strong from the middle to the anterior angles.

IRIDESSUS, n. g.

Gen. *Harpalo* quoad formam simillimus sed subfam. *Stenolophinae* pertinet, palpis labialibus articulo penultimo bisetoso. Caput laeve, foveis frontalibus vagis, vix impressis, linea subtile utrinque inter foveam et oculum interrupta. Mentum sinu acute dentato. Thorax relative magnus, quadratus, elytris haud angustior. Mas, tarsi anteriores quatuor sicut in *Harpalis* dilatati, articulo quarto cordato nullomodo bilobato.

Iridessus lucidus.

Harpalus lucidus, Morawitz, Beitr. z. Käferfauna Ins. Jesso, p. 72.

Widely distributed, but not abundant. Hakone Lake to Sapporo.

Iridessus relucens.

Harpalus relucens, Bates, Trans. Ent. Soc. Lond., 1873, p. 264.

The impressed oblique frontal line is entire in this species.

Stenolophus connotatus, Bates.

Bates, Trans. Ent. Soc. Lond., 1873, p. 327.

Hitherto known only from China. Mr. Lewis met with it abundantly at Niigata and Awomori.

Stenolophus propinquus, Morawitz.

Morawitz, l. c., p. 80.

Throughout Japan. Common from Yokohama to Hakodate.

Stenolophus agonoïdes.

S. vespertino, *proximo*, etc., affinissimus, set differt corpore (præcipue elytris) longiori, thoraceque postice gradatim sed valde angustato, angulis posticis distinctis sed obtusis; piceo-niger, antennarum articulis 2 basalibus, palpis, margine laterali thoracis pedibusque testaceo-rufis, labro marginibus mandibulisque basi rufis; thorace basi utrinque fovea lata sparsim grosse punctata, angulis distincte reflexo-marginatis; elytris chalybeato-iridescentibus, margine posteriori rufo, acute striatis, interstitiis versus apicem angustioribus et convexioribus. Long. $6\frac{1}{2}$ mm.

Niigata.

Acupalpus marginatus, Lucas.

Lucas, Explor. Alger. Ins., p. 75.

Hakodate and Otaru, in South Yezo.

Two examples, closely resembling others from Algiers and European Turkey, with which I have compared them. Piochard de la Brulerie considered *A. marginatus* to be only a variety of the common European species, *A. dorsalis*, F.

Bradytus macros.

B. ampliato major præcipue longior; magnus, gen. *Curtonoto* simillimus, oblongus, piceo-fuscus vel niger vix æneo-tinctus, antennis, palpis, thoracis margine laterali pedibusque plus minusve piceo-rufis; capite thoraceque coriaceis, hoc confluentem punctulato (disco læviori) quam in *B. ampliato* longiori, prope basin modice angustato, lateribus medio valde rotundatis, basin versus rectis, angulis posticis subacutis, margine basali utrinque late sinuato, fovea basali utrinque lata haud profunda, carinula parum elevata; elytris crenato-striatis; tibiis anticis extus apice late angulato-productis, margine pluri-spinoso, subserrato. Mas, tibiis posticis intus pilis mollibus perpauca vestitis. Long. 11 mm., ♂, ♀.

All the islands; under stones in river-beds.

Facies of the genus *Curtonotus*, but differs in the simple structure of the intermediate tibiae of the male. The soft hairs on the hind tibiae of the same sex are only three or four in number, and scarcely visible among the spines, but this character suffices to bring the species within the definition of the genus *Bradytus*, where it seems less out of place than in *Leiocnemis*.

Amara Zimmermanni, Putzeys.

Putzeys, Ann. Soc. Ent. Belg., xviii., p. 7.

Nagasaki ; Kioto.

Amara striatella, Putzeys.

Putzeys, Ann. Soc. Ent. Belg., xviii., p. 8.

Nagasaki ; Kioto.

Specimens (male) of *A. chalcites*, Zim., and *A. Zimmermanni*, Putz., received by Mr. Lewis from Putzeys himself and agreeing with his descriptions, seem to me only varieties of one and the same species, all gradations being found in the extensive series collected by Mr. Lewis.

A. striatella, doubtfully separated by Putzeys himself, is clearly only a slight variation, common enough in this genus, in which the striae are less deeply impressed.

Amara obscuripes, Bates.

Bates, Trans. Ent. Soc. Lond., 1873, p. 294.

Nagasaki, on the mountains ; rare. Ashinoyu ; abundant.

Morio Japonicus.

M. orientali, Dej., proxime affinis, vel ejus varietas geographica ; differt solum elytrorum interstitiis prope suturam subconvexis. Long. 17 mm.

Kiushiu ; under fir-bark at Konose and Yuyama.

In its somewhat greater size this species approaches nearest the form of *M. orientalis* found in the Andaman Islands. *M. orientalis* is an apparently common species throughout the whole Indo-Malayan region, and varies considerably in different localities. I have seen no

variety in which the interstices are nearly equally convex throughout the elytra, near the suture as well as on the sides, as they are in *M. Japonicus*.

Trigonognatha cuprescens, Motschulsky.

Motschulsky, Etud. Ent., 1857, p. 26.

Nikko, Kashiwagi, and Sado. Motschulsky's specimen was from Simoda.

Chaudoir erroneously referred this genus to *Triplogenius*. It is widely distinct from the subgroup to which *Triplogenius* belongs, and in fact is much nearer *Myas*, the North-American species of which it much resembles.* The mentum is deeply emarginated, with a broad truncated tooth; the labial palpi have the penultimate joint bisetose. Mr. Lewis' specimen does not very well agree with Motschulsky's description, though I agree with him in thinking it very likely belongs to the same species. It is scarcely depressed, and the elytral striæ are distinctly punctulated, not "impunctatis."

Trigonognatha aurescens.

Minor, nigra, collo, thorace elytrisque splendide æneis, subauratis, marginibus iridescentibus, palpis apice rufis; thorace quadrato, antice leviter rotundato, postice gradatim, modice, sinuato-angustato, angulis posticis rectis, margine incrassato, laterali postice crenato, basi depresso foveaque utrinque magna profunda extus (ante angulum) carina margini parallela delimitata; elytris convexis profunde striatis, striis punctulatis. Long. 15 mm., ♂, ♀.

Niohozan, under stones, October; and one example from Chiuzenji.

* The North-American species, *Myas coracinus*, Say, and *foveatus*, Lec., are much nearer, in the form of the thorax, tooth of the mentum, and in their submoniliform antennæ, to *Trigonognatha* than to *Myas*. The following is a magnificent species of the same genus from China, not yet described:—*Trigonognatha princeps*. Maxima, oblonga, lata, nigra, thorace margine purpureo, elytris igneo-cupreis, marginibus viridi-auratis; thorace transverso, subcordato-quadrato, postice modice sinuato-angustato; angulis rectis, fovea basali utrinque angusta, profunda, extus carina obtusa marginata; elytris subtilissime rugulosis nec politis, striis fundo punctulatis, interstitiis valde convexis; ante apicem abrupte et valde emarginatis (mas); corpore subtus impunctato. Long. 33 mm. Prov. Quang-tung, China.

Allotriopus hoplites.

Oblongus, gracilis, castaneo-fuscus, partibus oris pedibusque castaneo-rufis; capite fere sicut in *Hypherpe*, angusto, sed oculis paullo magis prominentibus; thorace elongato mox pone apicem dilatato, deinde usque ad basin angustato, angulis posticis obtusis sed apice dentiformibus, foveis basalibus linearibus utrinque duabus, profundis, lævibus; elytris punctulato-striatis, interstitiis convexis tertio postice unipunctato, humeris exstantibus dentatis; sternis ventrisque basi utrinque valde punctatis.

♂. Femora postica subtus medio obtuse dentata basi sinuata, trochanteribus elongatis; tibiæ intus serratæ. Long. 8—10 mm.

Chiuzenji and Oyayama, and other places of similar elevation, in rotten trees or under old timber.

Belongs to the genus *Allotriopus*, of which only one species has yet been described, from Mexico. It differs from the Mexican species in the hind tibiæ being straight, not bowed, and in the femora being dilated and toothed beneath in the male. *Allotriopus* agrees with *Pterostichus* in its short metathoracic episterna.

Hypherpes colonus.

H. castanipedi affinis, sed magis linearis. Elongatus, angustus, nigro-piceus, antennis palpis et pedibus rufo-castaneis; capite angusto, post oculos paullulum prominentes gradatim angustato; thorace elytris angustiori elongato-ovato, sat convexo, prope basin angustato ibique lateribus rectis, angulis posticis subacutis, fovea basali utrinque oblonga, profunda punctata; elytris punctato-striatis, interstitiis sat convexis, striola scutellari obsoleta ibique puncto ocellato; sternis utrinque grosse punctatis, episterno metathoracico curto sed angusto; femoribus validis. Long 12 mm., ♂.

Oyayama; one example from an old beech in April.

Belongs to *Hypherpes* by the absence of punctures from the 3rd elytral interstice. It is also not unlike in facies the narrower and more convex species of the genus, e. g., *H. castanipes*, differing in the relatively longer and more convex thorax.

Pterostichus macrogenys.

Elongatus, parallelopipedus, parum convexus, niger, palpis pedibusque castaneo-rufis, capite magno, genis tumidis post oculos maxime prolongatis, oculis parvis; mandibulis valde elongatis; thorace cordato-quadrato, angulis anticis productis et acutissimis, postice longe sinuatim sed parum angustato, angulis posticis acutis, fovea utrinque basali magna et profunda, sublævi, margine basali medio profunde sinuato versus angulum rotundato; elytris apice vix sinuatis humeris haud productis, punctulato-striatis, interstitiis parum convexis tertio bi- vel tri-punctato; corpore subtus lævi.

♂. Segmentum ultimum ventrale fovea magna et profundo medio longitudinaliter vix elevata, margine apicale reflexo medio indentato. Long. 23 mm., ♂, ♀.

Niohozan; one male and one female under a stone in the deep forest, June, 1880.

Pterostichus pachinus.

Elongatus, modice convexus, niger palpis pedibusque castaneo-rufis; capite subcrasso, ovato, genis parum tumidis, post oculos (sat convexos) paullo elongatis; thorace cordato, prope basin valde angustato et sinuato, angulis posticis rectis subacutis, anticis vix productis, fovea basali utrinque angusta, lineari; elytris apice oblique sinuatis, exarato-punctulato-striatis, interstitio tertio quadripunctato.

♂. Segmentum ultimum ventrale apice latum haud profunde foveatum, fovea medio paullo elevata, margine apicale haud reflexo. Long. 20 mm.

Junsai.

Allied to *P. sphodriformii*, Bates; but broader and more robust in all its parts, and further distinguished by the different form of the apical ventral segment in the male.

Pterostichus asymmetricus.

P. truncato (Dej.) subsimilis, sed magis robustus et genis post oculos elongatis et tumidis. Elongatus, niger, palpis et tarsis castaneo-rufis; capite subtriangulare, post oculos (parum convexos) tumido et dilatato, juxta collum subito constricto; thorace cordato, paullo post

medium valde sinuato-angustato, angulis posticis acutis, anticis haud productis, fovea utrinque basali lineari, sat profunda vage punctata; elytris elongato-ovatis, apice distincte sinuatis, sat profunde striatis, interstitio tertio 3—5 punctato. Long. 16 mm.

♂. Segmentum ultimum ventrale haud symmetricum; transverse profunde excavatum, margine apicale elevato inæqualiter bisinuato, medio processo subbifido armato.

♀. Segmentum ultimum ventrale latissimum.

Under stones on the margins of Junsai and Chiuzenji Lakes.

Pterostichus spiculifer.

P. impressicollis (Chaud.) similis. Oblongus subgracilis, parum convexus, niger, elytris iridescentibus, antennis palpis pedibusque rufo-piceis; capite quam in *P. impressicollis* post oculos magis tumido, juxta collum subito angustato; thorace cordato-quadrato, antice valde rotundato postice sinuato-angustato, angulis posticis rectis, fere acutis, elevatis, fovea utrinque lineaque dorsali profundissimis; elytris apice parum sinuatis, profunde striatis, interstitio tertio 4 punctato.

♂. Segmentum ultimum ventrale fovea lata profundissima irregulari margineque apicali medio spina longa armato. Long. 13 mm., ♂, ♀.

Nikko.

Resembles closely *P. impressicollis*, Chaud., of Northern Italy; but, besides the difference in the armature of the apical ventral segment of the male, it is distinguished by the long tumour behind the eyes, which is not narrowed, except at the neck, and there somewhat abruptly; also by the smaller interstitial punctures of the elytra, and more or less dull pitchy-red colour of legs, palpi, and antennæ.

Pterostichus mirificus.

P. truncato similis, paullo gracilior et magis convexus; niger nitidus, palpis et tarsis rufis, antennis piceo-rufis; capite fere sicut in *P. truncato*, genis post oculos convexos vix tumidis; thorace gracilius cordato, post medium magis angustato; angulis posticis rectis, paullulum exstantibus, fovea basali lineari, profunda, lævi; elytris convexis profunde striatis, interstitiis convexis, tertio 4-punctato.

♂. Segmentum ultimum ventrale transverse profunde excavatum, margine apicali medio late sinuatum angulis valde lobatis, lobis cornua recurva simulantibus. Long. 15 mm., ♂, ♀.

Awomori.

The apical ventral segment of the male is quite as extraordinary in form as in *P. asymmetricus*, but is symmetrical. Instead of a central subbifid lobe, the apical margin is broadly sinuated in the middle, with each of the external angles produced into a horn-like process, which curve upwards towards the tips of the elytra, and are visible from above.

Pterostichus (Omaseus?) polygenus.

Parvus, nigro-piceus, antennis palpis pedibusque castaneo-rufis; oculis prominentibus; thorace subcordato-quadrato, paullo ante medium sat rotundato postice paullo magis quam antice (et subrecte) angustato, angulis anticis parum productis, posticis dentiformiter prominentibus, margine laterali sat acute reflexo, intus sulculo angusto a disco separato, basi utrinque striis duabus profundis grossissime punctatis et carinula lævi prope angulum; elytris oblongo-ovatis, margine basali sat recto ad humerum denticulato, apice conjunctim sat acute prolongatis, profunde punctato-striatis striola scutellari brevissima (interdum obsoleta), interstitio tertio bipunctato; sternis utrinque (mesosternique pedunculo) grosse punctatis; metathoracis episternis ut in *Omaseis* sat brevibus postice angustatis; tarsis 4 posticis lateraliter tenuiter sulcatis; prosterni processu apice indistincte marginato. Long. 8 mm., ♂, ♀.

Nikko.

Closely allied to *P. (Omaceus) thorectes*, differing only in the thorax being much shorter, less regularly arcuated on the sides, and with a much narrower groove between the reflexed lateral margins and the disk. The two species form a distinct group closely allied to *P. (Lagarus) nimbatus* and *Solskyi*.

Pterostichus Thunbergi, Morawitz.

Morawitz, Bull. Acad. St. Petersb., v., 1863, p. 328; Bates, Trans. Ent. Soc. Lond., 1873, p. 289.

Yezo.

The metathoracic episterna are rather longer and narrower than they are in the restricted genus *Pterostichus* or in *Steropus*. They are nearly of the same shape as in *Omaseus*, but the general form and facies of the species do not agree with that group.

Pterostichus sejunctus.

P. Thunbergi simillimus, differt tantum thoracis angulis posticis acutis productis, margine ante angulum breviter sinuato; sternis ventrisque basi utrinque plus minusve punctatis. Long. 15 mm., ♂, ♀.

Yezo.

Distinguishable from *P. Thunbergi* only by the prominent and acute posterior angles of the thorax; but specimens of *P. Thunbergi* occur in which the angles have a slight projection. The punctuation of the sides of the sternum and basal segments of the abdomen is also not quite constant; though generally smooth in *P. Thunbergi*, examples occur in which they present numerous punctures.

Pterostichus (Omaseus?) defossus.

Platysmæ oblongopunctatæ primâ facie similis, sed differt thoracis angulis rotundatis metathoracisque episternis parum elongatis, &c. Niger supra plus minusve olivaceo-ænescens, antennis palpis pedibusque piceis; oculis sat prominentibus, fronte punctulata; thorace paullo ante medium valde rotundato, postice subrecte angustato, angulis posticis rotundatis, foveis basalibus utrinque duabus profundis et grosse punctatis, interiori longiori et profundiori; elytris oblongo-ovatis, margine basali utrinque valde arcuato, apice oblique modice sinuatis, sat profunde striatis (stria 7ma apice excepta obsoleta) striola scutellari modice elongata, interstitiis convexis, tertio 2—3 punctato; tarsis 4 posticis gracilibus, bisulcatis; sternis lateraliter modice punctatis, metathoracis episternis fere sicut in *Omaseo* modice elongatis.

♂. Segmentum ultimum ventrale simplex. Long. $8\frac{1}{2}$ —10 mm., ♂, ♀.

Nikko.

Pterostichus (Omaseus) prolongatus; *P. (Lyperus) id.*,
Morawitz.

Morawitz, Bull. Acad. St. Petersb. v., 1862, p. 251.

P. (Steropus) tropidurus, Bates, Trans. Ent. Soc. Lond.,
1873, p. 288.

Omaseus Japonicus, Motschulsky, Etud. Ent., 1860,
p. 6?

The typical form of this species has perfectly flat elytral interstices, and the elytra are elongate-oblong.

East Siberia; Shanghai; Yezo.

Var. *Elytrius profundius striatis, interstitiis convexis.*

Pterostichus (Lyperus) fuliginus, Morawitz, Bull. Acad. St. Petersb., v., 1862, p. 325; *id.*, Beitr. z. Kaferfauna Ins. Jesso, p. 52.

Yezo, and the main island.

A series of this variety taken by Mr. Lewis exhibits various degrees of convexity of the elytral interstices. Examples from Fujisan form the extremes in this respect, and have the *prima facie* aspect of a distinct species; the elytra are relatively shorter and dilated posteriorly; but this modification is seen in Yezo specimens of *O. prolongatus*.

The metathoracic episterna are too narrow and elongated for *Steropus*, although the facies of the insect is that of the species of *Steropus* allied to *S. orientalis*. I hesitate to adopt Motschulsky's prior name *japonicus*, as the size he gives ($4\frac{1}{2}$ lines) and the insufficient diagnosis make the identity of the species doubtful.

Pterostichus (Omaseus) leptis.

O. nigro affinis, sed gracilior thorace precipue angustiori prope basin fortius sinuato-angustato, angulis posticis rectis subacutis. Niger, palpis castaneo-rufis, antennis tarsisque piceis; capite punctulato, oculis prominentibus; thorace basi utrinque crebre ruguloso-punctato, profunde foveato, bistriato, carinulaque obtusa juxta angulum; elytris profunde subpunctulato-striatis. Long. 20 mm., ♂, ♀.

Sapporo, Hakodate, Niigata, and Fujita.

The prosternal process is margined at the apex, but sometimes very faintly. It is distinctly margined in many other species of the group, e. g., *O. fortis*, *Eschscholtzi*, &c.

Pterostichus (Omaseus) ambigenus.

O. nigræ haud dissimilis sed thorace fere ut in *Platysma vitrea* postice magis quam antice angustato, lateribus valde arcuatis, angulis posticis breviter prominentibus acutis. Niger leviter æneo-tinctus; capite mox pone oculos prominentes angustato, foveis frontilibus tenuibus vix impressis; thoracis fovea basali utrinque lata et profunda, punctata, bistriata, carinulaque lævi juxta angulum; elytris apice sat valde sinuatis, punctulato-striatis, interstitiis modice convexis, tertio punctis 3 vel 4.

♂. Segmentum ultimum ventrale modice concavum, antice tuberculum triangulari incumbente, depressum, apice tantum libro. Long. 11 mm., ♂.

Shimidzu-togé. One example in August.

Platysma oblongopunctata, Fab.

Fab. Syst. El., i., 183.

Nikko. Two examples, not differing from specimens from Eastern Europe.

Lagarus nimbatus, Morawitz.

Morawitz, Bull. Acad. St. Petersb. 1862, p. 235.

Argutor? microcephalus, Motschulsky, Etud. Ent., ix., 1860, p. 6?

Lagarus microcephalus, Bates, Trans. Ent. Soc. Lond., 1873, p. 285.

Generally distributed throughout Japan.

Chaudoir (Bull. Mosc., 1878, p. 60) has given valid reasons for rejecting the name of *A. microcephalus* for this species. There is not much in the specific description above cited to forbid the supposition that it refers to the species; but in a subsequent paper, in which Motschulsky proposed and defined a genus for the reception of his *A. microcephalus*, genus *Rhagadus*, Bull. Mosc., 1865, iv.,

p. 261, characters are adduced which are quite inapplicable to the species. They are possibly only blunders, and the species may be the same; but it is safer to reject the name altogether.

Lagarus nimbatidius; *Feronia* (?) *nimbatidia*, Chaudoir.

Chaudoir, Bull. Mosc., 1878, p. 63.

Japan.

Said to be very near *L. nimbatus*, differing in the more rounded sides and hind angles of the thorax. In *L. nimbatus* the hind angles are always distinct, and sometimes projecting; but they vary, and I doubt whether *L. nimbatidius* is more than one of the varieties.

Lagarus sulcitarsis, Morawitz.

Morawitz, Bull. Acad. St. Petersb., v., p. 250.

Hakodate; also at Fukui, in the main island.

Lagarus dulcis.

L. sulcitarsi proxime affinis et similis; major et latiori, niger subopalescens, politus, antennis palpis et pedibus piceis; capite ovato, post oculos sat prominentes recte angustato; thorace relative magno convexo, quadrato lateribus fere regulariter arcuatis (antice magis quam postice angustato) angulis anticis vix productis, posticis omnino rotundatis, margine laterali tenui usque ad medium basin continuato, supra basi utrinque fere plano, punctulato, linea elongata recta (a margine distante) impressa; elytris elongato-oblongis punctulato-striatis, interstitiis planis, tertio tripunctato; tarsis 4 posticis bisulcatis.

♂. Segmentum ultimum ventrale simplex. Long. 10 mm., ♂, ♀.

Ogura Lake, in reed-refuse.

Pæcilus encopoleus, Solsky.

Solsky, Horæ Soc. Ent. Ross., ix., 4, p. 306; Harold, Deutsche Ent. Zeitschr., 1877, p. 339.

Pæcilus planicollis, Motsch., Etud. Ent., 1860, p. 5 (?);

Bates, Trans. Ent. Soc. Lond., 1873, p. 284.

Generally distributed throughout Japan.

All the examples of *Pæcilus* of the *cupreus* group taken by Mr. Lewis have three basal joints of the antennæ red.

As Motschulsky gives two joints only as red in *planicollis*, Harold rightly rejects his name for the species, to which his description in other respects applies.

Pæcilus fortipes, Chaudoir.

Chaudoir, Bull. Mosc., 1850, iii., p. 131; id. *ibid.*, 1863, i., p. 222; id., Abeille, 1869, p. 234; Putzeys, Ann. Soc. Ent. Belg., xviii., 1875, p. 7. *Pæcilus lepidus*, Fab. var., Moraw., Beitr. z. Kaferfauna Ins. Jesso, p. 45.

Mr. Lewis has brought home a large series of this species, which I find agree with East Siberian examples in the structural differences which separate the species from the European *P. lepidus*. It is a much larger and more robust insect, and in all its varieties distinguishable by the sides of the thorax falling obliquely on the base, thus forming an obtuse angle, instead of being sinuated as in *P. lepidus*.

Pæcilus prolixus, Putzeys.

Putzeys, Ann. Soc. Ent. Belg., xviii., 1875, p. 10. *Pæcilus Koyi*, id. olim (nec Germar.).

Yezo.

Differs from *P. fortipes* apparently only in the sides of the thorax being regularly arcuated. I have East Siberian varieties of *P. fortipes* which answer to this description, but have failed to detect any in Mr. Lewis's series from Yezo.

Stomis prognathus.

Piceo-niger elytris opalescentibus, palpis fulvis, antennis pedibusque plus minusve rufo-piceis; mandibulis et palpis quam in *S. pumicato* multo magis elongatis, labro profunde et late emarginato, capite post oculos transversim depresso; thorace cordato, ante medium valde rotundato, post medium sinuato-angustato angulis posticis rectis, basi utrinque grosse punctato profunde unistriato; elytris subelongato-ovatis, juxta basin cite angustatis, angulo humerali dentiformi, punctulato-striatis; sternis ventrisque basi grosse punctatis. Long. 10 mm., ♂, ♀.

Hakone and Chiuzenji, in shady *Cryptomeria* forests.

Agrees with *Stomis pumicatus* in all essential points of structure, but very much larger and of different facies, owing to its more ovate form, and especially to its thorax being dilated and rounded more in front, and strongly sinuated and narrowed behind. The mandibles are greatly elongated in both sexes, the palpi long and linear, and the antennæ relatively much longer than in *S. pumicatus*.

EUCALATHUS, n. g.

Gen. *Calatho* affinis; corpus elongatum, gracile, thorace elytris multo angustiori, elongato-quadrato. Mentum dente acute bifido. Palpi graciles, articulis terminalibus apice attenuatis. Antennæ elongatæ gracillimæ, articulo tertio quarto vix longiori. Prosternum apice haud marginatum, apice verticaliter acute carinato. Metasterni episterna brevia. Elytra apice haud perspicue sinuata, sat profunde striata, interstitio tertio bipunctato. Tarsi 4 posteriores subtus longe et dense pilosi, supra glabri, articulis 1 et 2 utrinque unisulcatis; ungues (prope apicem excepto) acute denticulatæ; mas articulis 1—3 elongato-triangularibus.

The facies of the two species known of this genus are quite different from the *Calathi*, even from such aberrant forms as *C. Solieri* and *C. Deyrollei*. From the true *Calathi* they also differ in the densely hairy soles of the four hind tarsi and the unmarginated apex of the prosternum, characters which are presented by *Pristosia picea*, but associated with features foreign to *Eucalathus*, such as the short triangular form of the dilated tarsi, the obsolete tarsal grooves and the impunctate 3rd elytral interstice. I think it likely that the East Siberian *Calathus nitidulus* (Mor.) belongs to *Eucalathus*.

Eucalathus æneolus.

Pristonychus æneolus, Bates, Trans. Ent. Soc. Lond., 1873, p. 272.

Hiogo; Nikko, Miyanoshita; Fukushima; Wada togé.

A handsome species, resembling in form the slenderer species of *Pristonychus*, but of olive-green colour, sometimes rich golden olive, and highly polished. It varies in size from 12 to 16 mm. A specimen from Nikko has the thorax much narrowed and sinuated near the base.

Eucalathus colpodoïdes.

E. æneolo multo minor et gracilior. *Æneo-niger*, antennis, palpis, tarsis (interdum tibiis) et trochanteribus fulvo-rufis, elytris viridi-vel cupreo-auratis fere sicut in *Calatho metallico*; capite ovato, post oculos haud tumido, collo supra transversim depresso; thorace quadrato antice perparum rotundato, postice modice et recte angustato, angulis posticis rotundatis, basi medio late sinuato, margine laterali vix perspicue incrassato, valde reflexo, fovea utrinque basali magno et profundo; elytris basi angustis, margine basali valde arcuato, humero haud producto, punctulato-striatis, striola scutellari sat elongata. Long. 11—12 mm., ♂, ♀.

Nikko, Nantaizan and Niohozan.

At first sight resembles the metallic species of *Colpodes*; but the colour is of different lustre from that seen in any species of *Colpodes*, and nearest resembles that of the European *Calathus metallicus*.

Crepidactyla melantho.

C. nitida minor et gracilior; nigra, antennis palpis tibiis et tarsis fulvo-rufis vel piceo-rufis; thorace relative parvo, quadrato postice paullo magis quam antice angustato, lateribus modice arcuatis, margine reflexo, angulis obtusis rotundatis, medio basi sinuato, fovea utrinque basali lata et profunda; elytris elongato-ovatis, prope basin angustatis, humeris obliquatis, profunde striatis, interstitiis convexis tertio bi-vel tripunctato; tarsi 4 posterioribus utrinque bisulcatis. Palpi labiales mas et fœm. securiformes; apice oblique truncati (♂) angulo exteriori acutissimo; maxillares subcylindrici, truncati. Long. 12 mm., ♂, ♀.

Sapporo.

The male labial palpi differ from those of *Pristodactyla cyclodera* in having their outer apical angle prolonged and acute. If *Pristodactyla* be limited to those species in which the terminal joints of the palpi are cylindrical (though truncated), *P. cyclodera* must be removed to *Crepidactyla*, which genus again is scarcely to be distinguished from *Taphria*, the only structural difference being the more developed grooves of the posterior tarsi.

TREPHIONUS, n. g.

Gen. *Calatho* affine; sed differt unguibus simplicibus, &c. Corpus fere sicut in *Anchomeno*, gracile. Caput angustum; oculi haud prominentes; palpi sicut in *Calathis* subgraciles, fere cylindrici apice breviter truncati; mentum dente mediano apice emarginato. Thorax oblongo-cordatus, postice modice angustatus, lateribus ante angulos basales brevissime sinuatis, angulis ipsis (cum margine basali) rotundatis. Elytra apice integra, interstitio tertio impunctato. Prosternum apice haud marginatum. Metathoracis episterna sat brevia postice parum angustata. Tarsi supra glabri subtus sparsim setosi, 4 posteriores articulis 1—4 utrinque sulcati et supra subtiliter alutacei medioque excavati; maris anteriores articulis 3 breviter triangularibus. Ungues simplices.

A genus having a superficial resemblance to the *Anchomeni*, but with a form of thorax closely resembling that of the *Calathi* and *Pristodactylæ*, especially of the species in which it is narrowed behind, with the hind angles broadly rounded, and forming a curve with the basal margin. The sinuation of the sides just before the posterior angle is unlike anything I have seen in *Calathus*, and most nearly approaches the form presented by certain species of *Pristonychus*, to which genus *Trephionus* approximates also in the form of the head and the impunctate 3rd elytral interstice.

Trephionus Nikkoensis.

Gracilis, castaneo-fuscus nitidus, antennis partibus oris pedibusque castaneo- vel piceo-rufis; capite angusto, lævi, foveis frontalibus parum impressis; thorace oblongo-subcordato, postice modice angustato, lateribus ante angulum posticum sinuatis, puncto setifero longe ante angulum basalem sito, angulis late (cum margine basali) rotundatis, fovea utrinque basali sat profunda lævi; elytris oblongo-ovatis sat profunde striatis, stria scutellari modice elongata, interstitiis omnibus impunctatis. Long. 9 mm., ♂, ♀.

Nikko; Nantaizan. Damp forests in shady places.

Anchomenus (Limodromus) subovatus, Putzeys.

Putzeys, Ann. Soc. Ent. Belg., xviii. (1875), p. 6.

North Nipon (*Putz.*). Chiuzenji (*Lewis*).

Anchomenus (Platynus) xestus.

A. scrobiculato affinis. Depressus, niger politissimus, elytris opalescentibus; antennis palpis, pedibus (femoribus nigris exceptis) fulvo-piceis; capite post oculos minus prominentes elongato-tumido (fere sicut in *P. complanato*) gradatim usque ad collum angustato, collo supra depresso; thorace fere ut in *A. scrobiculato* quadrato-cordato, postice sat sinuato-angustato, angulis posticis rectis, fovea basali magna profunda lævi; elytris ovatis margine laterali sat explanato-reflexo, apice parum sinuatis, striatis, striis haud perspicue punctulatis, interstitiis paullo convexis, tertio 3-punctato; metathoracis episternis quam in *A. scrobiculato* paullo longioribus; tarsis posterioribus valde sulcatis. Long. 10 mm.

Nikko.

Anchomenus calleides.

A. cyaneo (Dej.) proxime affinis; major et robustior, elytris ad suturam magis prolongatis margineque fortius sinuato. Cyaneus vel olivaceo-viridis; thorace relative parvo, quadrato, subcordato, postice (longe ultra medium) sinuato-angustato, angulis posticis rectis, supra transversim rugoso, basi omnino scabroso-punctato; elytris oblongo-quadratis, apice ad suturam paullo depressis, prolongatis extus sinuatis, dorso exarato-striatis striis punctulatis; tarsorum articulo quarto sat profunde emarginato. Long. 11 mm., ♂, ♀.

Morioka and Midzusawa. Under stones in the Kitakamigawa.

Extremely near the South European *A. cyaneus*, but rather larger and more robust, the thorax a little more sinuate and narrowed at the base, and the elytra prolonged at the sutural apex with more distinct ante-apical sinuation. The 1st ventral segment has a few punctures on each side.

Anchomenus leucopus, Bates.

Bates, Trans. Ent. Soc. Lond., 1873, p. 279.

Niigata, Awomori, and Shimonosuwa are additional localities for this elegant species,* which belongs to the same group as *A. cyaneus*, *calleides*, &c. The prosternum and metasternum are rather strongly punctured.

Anchomenus (Agonum) sculptipes.

A. mæsto proxime affinis et similis, sed major præcipue magis elongatus; toto niger, palpis apice rufis; capite ovato oculis parum prominentibus; thorace sicut in *A. mæsto* sed longiori, subcirculari, postice perparum angustato, margine laterali postice et basali (utrinque) elevato; elytris elongato-oblongo-ovatis, apice distincte sinuatis, striatis, striis parum conspicue punctulatis, interstitiis subconvexis, tertio tripunctato; tarsis posterioribus opacis late sulcatis, supra medio angustissime unicarinatis. Long. 8—10½ mm., ♂, ♀.

Junsai Lake, Hakodate; rare.

The side grooves of the four posterior tarsi are remarkably broad, and opaque with minute sculpture, leaving a narrow and sharp dorsal carina alone polished. A similar form is found in Eastern Siberia, apparently undescribed, in which the thorax is shorter (a little longer only than in *A. mæstus*), and the tarsal carinæ less narrow.

Anchomenus (Agonum) suavissimus.

A. gracili (Gyll.) proxime affinis; duplo major; gracilis, niger politissimus, elytris subopalescentibus; capite ovato; thorace ovato, quam longitudine vix latiori, lateribus æqualiter arcuatis, angulis anticis sat valde productis, posticis omnino rotundatis, fovea utrinque basali lata, lævi, medio lineola impressa; elytris elongato-oblongo-ovatis, apice sat sinuatis, plica basali antrorsum obliquata, dorso subtiliter sed acute punctulato-striatis, interstitiis planissimis, tertii punctis 2 et 3 in medio interstitio sitis; tarsis tenuibus, 4 posticis nitidis utrinque late sulcatis. Long. 9 mm., ♂, ♀.

Ogura Lake, Honjo, Tokio. Among reeds in marshes.

* It occurs in marshes, under dead reeds.

Anchomenus (Agonum) Oguræ.

A. æneotinctæ quam maxime affinis et similis, sed differt elytrorum striis haud perspicue punctatis, antennis (scapo articulisque 2—3 basi flavis exceptis) nigro-fuscis, &c. Supra fusco-æneus, corpore subtus (pectore lateribus fuscescentibus exceptis) antennis basi, thoracis elytrorumque marginibus, et pedibus flavo-testaceis; thorace transverso; elytris valde subtransversim sinuatis, disco utrinque areis duabus depressis. Long. 7—7½ mm., ♂, ♀.

Ogura Lake.

Anchomenus (Agonum) charillus.

A. dolenti (Sahlb.) similis, sed differt thorace longiori, postice angustato, angulis subrotundatis, pedibusque lætius rufescentibus. Subgracilis, supra æneus, subtus nigro-æneus, trochanteribus femoribus tibiisque testaceo-rufis, tarsis, antennis basi, palpis basi et apice, piceis; thorace quadrato-cordato ante medium leviter rotundato postice sat angustato, angulis posticis obtusissimis, margine basali prope angulos antrorsum arcuatim obliquato; elytris relative latis, postice paullo ampliatis, subtiliter striatis, striis haud perspicue punctulatis, interstitiis fere planis tertio 4—5 punctato. Antennæ articulo tertio dimidio apicali sat dense pubescenti. Long. 6¼ mm.

Summit of Iwaki-san, under stones by a rivulet; and one specimen on Ontake.

Colpodes Bentonis.

Quoad formam *Platynis* typicis similis, metathoracis episternis brevibus elytrorumque marginibus explanatis acutis, sed tarsis anticis bilobatis, &c. Elongatus, depressus, castaneo-fuscus vel niger, elytris viridi-auratis politis, antennis, partibus oris, elytrorum et thoracis marginibus explanatis pedibusque (femoribus interdum castaneo-fuscis) fulvo-rufis; capite post oculos modice prominulos elongato, gradatim angustato, collo supra transversim depresso; thorace cordato, angulis posticis productis acutis, antice lato cum angulis anticis late rotundato, prope basin valde sinuato; margine laterali explanato-reflexo; elytris ovatis, humeris late rotundatis, apice profunde sinuatis, margine laterali explanato-reflexo, punctulato-striatis, interstitiis vix convexis tertio

tripunctato. Tarsis anticis articulo quarto bilobato, lobis angustis, sat longis; intermediis bilobato, lobo exteriori longiori; posticis emarginato. Long. 10—12 mm., ♂, ♀.

Nikko; Awomori, under forest-trees.

Colpodes mutator.

C. Bentonis affinis, differt solum; 1, colore nigro elytris vix æneo-tinctis vel iridescentibus; 2, thorace antice paullo minus late rotundato margineque explanato-reflexis angustiori et angustius rufescenti; 3, elytris prope apicem paullo minus profunde sinuatis; 4, tarsis anticis minus longe bilobatis. Long. 11—12 mm., ♂, ♀.

Fukushima.

The slight differences above pointed out between this and the preceding are constant in the tolerably numerous series of both which I have examined. The form of the thorax varies a little; but it is always less broadly dilated anteriorly, and the dilatation is more in front, so that the posterior narrowing is longer and more gradual, the posterior angles being in both species almost equally projecting and acute. The colour is uniformly pitchy-black, shining, with a very narrow dull tawny edging to the thorax and elytra. The epipleuræ and femora are always dark like the under side of the body; the elytra are slightly tinged with bronze-green or are iridescent.

Colpodes integratus.

C. Bentoni et *mutatori* proxime affinis sed differt elytris apice vix perspicue sinuatis. Elongatus sat depressus, castaneo-fuscus, elytris aurato-vel viridi-æneis, antennis, palpis, elytrorum margine pedibusque (femoribus obscurioribus) piceo-rufis; thorace fere ut in *C. bentonis* cordato, prope basin valde angustato, sed angulis posticis minus productis, fere rectis, margineque haud perspicue vel vage rufescenti; elytris regulariter ovatis, versus basin angustatis. Long. 12 mm.

Miyanoshita.

The tarsal grooves, which are deep and well marked, especially on the middle tarsi in *C. Bentonis*, and rather less so in *C. mutator*, are in the present species scarcely visible.

Colpodes astictus.

Gracilis, elytris ovatis convexis; niger nitidus, palpis antennis tarsisque piceo-fulvis; oculis parvis modice convexis, capite convexo, postice prolongato, collo supra transversim depresso; thorace angusto, subovato, postice multo magis quam antice et recte angustato, angulis fere rectis (apice acutis), margine laterali anguste reflexo, lateribus et basi ruguloso-punctatis; elytris ovalibus, mox a basi angusto rotundato-ampliatas, apice oblique sinuatis, profunde striatis striis punctulatis, interstitiis modice convexis impunctatis. Mandibulæ maxillæ et palpi maxillares valde elongata; metathoracis episterna brevia; tarsi postici sat profunde et perspicue bisulcati, articulo quarto omnibus modice emarginato. Long. 11—12 mm., ♂, ♀.

Oyayama; Yuyama, in Higo; Kashiwagi, in Yamato.

Polymorphous as *Colpodes* is known to be, I place this species in the genus with great reluctance, the 4th tarsal joint being scarcely more emarginate than in many *Anchomeni*; it would, however, be still more out of place in any section of *Anchomenus*. In the long and projecting mandibles and impunctate elytral interstices it agrees with the species of *Colpodes* formerly included in the genus *Pleurosoma*, Guérin, but has little general resemblance to them. It has also some affinity to *Cyrtolaus*, Bates.

Colpodes amphinomus.

Agonis majoribus haud dissimilis; piceo-niger, nitidus, antennis, palpis, thoracis margine laterali pedibusque castaneo-rufis; capite post oculos convexos gradatim angustato, collo subconstricto; thorace subovato, postice multo magis quam antice angustato, angulis posticis rotundatis, anticis haud productis, margine laterali sat late explanato-reflexo, intra marginem et in fovea magna basali plus minusve punctato; elytris ovatis, humeris rotundatis, apice sinuatis, ad suturam obtusis, punctulato-striatis, interstitiis modice convexis, tertio tripunctato, puncto tertio prope apicem. Metathoracis episterna subelongata et angustata. Tarsi posteriores extus tantum sulcati; articulo quarto minime emarginato, anteriorum sat emarginato, lobis inæqualibus. Long. 8½—10 mm., ♂, ♀.

Kashiwagi and Oyayama.

Colpodes limodromoïdes.

Anchomeno (*Limodromo*) similis; valde elongatus, parallelogrammicus, piceo-niger nitidus, antennis palpis, thoracis margine laterali pedibusque castaneo-rufis, corpore subtus plus minusve castaneo; capite mox pone oculos valde prominentes angustato; thorace lævi, quadrato, paullo ante medium modice dilatato, deinde postice leviter sinuatim angustato, angulis posticis obtusis sed distinctis, margine laterali sat late explanato-reflexo; elytris prope apicem oblique sinuatis, apud suturam productis breviter truncatis, angulo suturali breviter dentato, dorso punctulato-striatis, interstitiis subconvexis. Metathoracis episterna elongata et angustata. Pedes elongati robusti; tarsi posteriores utrinque sulcati, articulo 4to omnibus emarginato. Long. 15 mm.

All the large islands, and in Sado. Has the habits of *Anchomenus livens*, and is rare.

As *C. amphinomus* and numerous similar species look like *Agona*, with tarsi modified in the sense of *Colpodes*, so this species may be looked upon as a *Limodromus* or a *Batenus*, Motsch., with similar modification. If this be truly the case, *Colpodes* is an artificial genus, composed of species of different generic groups, all having the tarsi more or less adapted for climbing up stems of plants or on foliage.

Colpodes elainus.

Elongatus, subdepressus, piceo-niger nitidus, elytris olivaceo-æneis, antennis, palpis thoracis margine laterali tibiis et tarsis castaneo-rufis; capite mox pone oculos valde prominentes recte angustato, collo subconstricto, palporum articulo terminali fusiformi (apice attenuato); thorace subcordato, antice usque ultra medium sat late rotundato, postice sinuato-angustato, angulis posticis parum obtusis, anticis valde rotundatis, margine laterali explanato-reflexo anguste castaneo-rufo, dorso transversim strigoso, foveis latis basalibus punctatis; elytris valde elongatis fere parallelis, apice oblique subsinuatis apud suturam subproductis rotundatis, punctulato-striatis interstitiis planis, tertio tripunctato. Metathoracis episterna angusta sed modice elongata. Tarsi postici extus sulcati; articulo quarto anteriorum quatuor sat

profunde bilobato, posticorum profunde emarginato. Long. 13 mm.

Kashiwagi.

Colpodes chloreis.

Elongatus, postice leviter ampliatus; capite et thorace relative parvis, niger politis, elytris obscurius subcyaneo-æneis vel æneis, antennis palpis tibiis et tarsis castaneorufis, femoribus corporeque subtus piceis; palporum articulo terminali fusiformi; capite post oculos modice prominentes recte angustato, collo constricto; thorace subcordato, antice perparum rotundato, postice modice angustato leviter sinuato, angulis posticis obtusis, margine laterali anguste explanato-reflexo subrufescenti, foveis lævibus; elytris apice haud perspicue sinuatis, striis subtilissime punctulatis, interstitiis fere planis tertio tripunctato. Metathoracis episterna elongata et angustata. Tarsi posteriores utrinque sulcati, articulo quarto anteriorum profunde, posteriorum modice, emarginato. Long. 10 mm.

Hakone; Nikko.

Colpodes sylphis, Bates.

Bates, Trans. Ent. Soc. Lond., 1873, p. 277.

Previously recorded from Hiogo only. Mr. Lewis has since found it abundantly at Miyanoshita, Oyama, Chiu-zenji. It is similar in general form to *C. chloreis*, but differs by its brighter metallic colouring, more broadly margined thorax, with projecting hind angles, &c.

Colpodes Hakonus, Harold.

Harold, Deutsche Ent. Zeitschr., 1878, p. 213.

Hakone (Dönitz); Miyanoshita (Lewis).

Many specimens taken by Mr. Lewis differ from Harold's description, and from examples taken at Miyanoshita, in the hind angles of the thorax being obtuse or rounded, without any trace of "die äusserste spitze jedoch ziemlich scharf." I can detect no other difference: they are from Nikko, Iwaki San, Chiu-zenji, Yuyama, and also from Miyanoshita, where the type-form occurs.

Colpodes speculator, Harold.

Harold, l. c., p. 214.

Hakone (Dönitz); Chiuzenji (Lewis).

Colpodes aurelius.

C. modestiori proxime affinis, differt solum thorace angustiori late cordato elytrisque aurato-æneis; testaceo-rufus, capite et thorace supra et infra nigro-castaneis, hujus lateribus rufis; capite sicut in *C. modestiore* relative parvo, post oculos parum elongato; thorace breviter cordato-quadrato postice sinuato-angustato, angulis obtusis sed distinctis, lateribus minus late explanatis, valde reflexis; elytris profunde striatis striis punctatis. Long. 7 mm.

Miyanoshita and Oyama.

A large series, quite constant in the slight characters which distinguish it from *C. modestior*. The colour of the elytra is more golden brassy than in *C. lampros*, and has less of green tinge.

C. modestior is found also abundantly at Miyanoshita, and thence in various localities to Hiogo.

Colpodes rubriolus.

C. ruficipiti (auct.) similis. Læte pallido-rufus, elytris (cum epipleuris) viridi cyaneis margine basali et scutello rufis, femoribus apice nigris; thorace quadrato, paullo ante medium modice dilatato, antice magis quam postice angustato, angulis posticis obtusis sed distinctis; elytris ovatis, apice oblique biflexuoso-truncatis, angulo suturali spinoso, dorso punctulato-striato, disco post medium depresso, interstitiis planis; tarsorum articulo 4to anguste bilobato, posticorum lobis brevioribus parum inæqualibus. Long. $7\frac{1}{2}$ mm.

Near Kami-ichi; one example beaten off a large Celtis. In Ceylon an allied species occurs commonly in garden-refuse.

The *C. ruficeps* was originally described in the "Annullosa javanica" by Macleay; the name was afterwards applied by Eschscholtz to a Manilla species, and later on by Chaudoir to a species found in Bengal, Southern

India, and Ceylon. I think it very probable that all three are perfectly distinct species. Macleay's description is so short and vague that it would apply to all, and neither Eschscholtz nor Chaudoir seems to have examined an example from Java. A good series of a species from Java, which I obtained from Dr. Mohnike's collection, show a form of apical truncature quite different from that described by the other authors, the margin near the suture being straight for a short space, and armed at each angle (on each elytron) with a short tooth or spine, making the apex briefly quadrispinose. This may be the true *C. ruficeps*. Eschscholtz's species seems to have a slight sinuation, causing the suture to be simply acute. Chaudoir's differs in having the epipleuræ of the elytra red.

Euplynes Batesi, Harold.

Harold, Deutsche Ent. Zeitschr., 1877, p. 341.

Mohezi.

Mr. Lewis obtained this interesting insect in the Yokohama district, at Bukenji and Miyanoshita, and also at Junsai, in flowers and on foliage. Harold is undoubtedly right in referring it to the genus *Euplynes*, Schmidt-Goebel, which Chaudoir so strangely misunderstood, treating *Euplynes viridipennis* as a species of *Colpodes* allied to *C. ruficeps*. It is distinguished from *Colpodes* by the 4th tarsal joint being strongly bilobed in all the feet.

Perigona acupalpoides.

Acupalpo meridiano haud dissimilis. Subdepressa, castaneo-nigra, abdomine, partibus oris, antennis, pedibus, macula quadrata humerali suturaque, rufis; capite post oculos prominentes haud tumido; thorace transverso, quadrato, antice parum rotundato, postice modice angustato, angulis posticis obtusis, limbo interdum castaneo-rufo; elytris striatis, interstitiis convexis. Long. 4 mm.

All the islands; under bark of various trees, beech, oak, and fir.

The red sutural border is limited to the 1st interstice, and does not reach the scutellum; the shoulder-spot extends from the 3rd stria to the margin, and is not longer than broad.

Apparently allied to the Bornean *P. nigricollis*, Motsch.

Perigona discipennis.

Depressa, testaceo-rufa, capite (epistomate partibusque oris exceptis) maculaque oblonga posteriori elytrorum, nigris, interstitiis 1 et 2 margineque laterali et apicali rufis; thorace transverso, quadrato, antice modice rotundato, postice angustato, angulis posticis obtusis; elytris striatis, interstitiis convexis. Long. $3\frac{1}{2}$ mm.

Nagasaki, Konose, and Yuyama, under bark of fir.

The black or blackish discoidal streak of the elytra commences at about one-third the distance from the base in a nearly straight frontal edge, and extends to the apex and sides, not, however, including the extreme apical or lateral margins; inwards it reaches the 2nd stria from the suture. The general form is oblong, rather narrow, and straight-sided; the thorax flat.

Perigona sinuata.

Angustior, oblonga, minus depressa. Testaceo-rufa, capite supra et elytris fusco-nigris, his marginibus et linea suturali prope basin et apicem angusta sed postmedium dilatata et interstitia 1—3 tegenti, rufis; thorace minus transverso, quadrato, postice longius et plus minusve sinuatim angustato, angulis posticis fere rectis, dorso convexiusculo, basi depresso; elytris substriatis, interstitiis prope suturam convexis. Long. 3— $3\frac{1}{2}$ mm.

Miyanoshita; Oyama. Under bark.

Perigona tachyoides.

Magis ovata et convexa; fusca, capite thoraceque nigris vel castaneis, elytris testaceo-flavis macula communi anteriori (a basi et lateribus distant) fasciaque subapicali fuscis; antennis partibus oris pedibusque testaceis; thorace valde transverso, postice sat angustato, angulis posticis obtusis sed distinctis, dorso parum convexo; elytris prope suturam substriatis et interstitiis convexis sed versus latera lævissimis. Long. $3\frac{1}{4}$ mm.

Nagasaki, Kobé, and Kashiwagi.

Similar in colour and markings to *P. Beccarii*, Putz., from Borneo.

Pogonus Japonicus, Putzeys.

Putzeys, Ann. Soc. Ent. Belg., 1875, xviii., p. 8.

S. Nipon ; one example.

Not met with by Mr. Lewis.

Putzeys records a *P. flavipes*, Motsch., from Japan immediately after the above ; the species is no doubt the well-known *Patrobis flavipes*, and not a *Pogonus*, as the author's mode of entering it on the list would lead one to infer.

Trechus discus, F.

Tokio ; Niigata ; Hakodate.

Three examples not distinguishable from European specimens. Two of them are rather larger, viz., $2\frac{1}{2}$ — $3\frac{1}{2}$ lin. The size given by Schaum in the Ins. Deutschl. is $2\frac{1}{3}$ lin.

Trechus oreas.

T. rubenti proxime affinis sed differt capite multo angustiori, mandibulis valde elongatis, oculis parvis, etc. Gracile ovatus sat convexus, castaneo-rufus glaber, palpis antennis pedibusque pallidioribus ; capite angusto, elongato, post oculos parvos gradatim angustato ; thorace quam in *T. rubenti* longiori, subcordato ante basin profunde sinuato, angulis posticis acutis exstantibus ; elytris elongato-ovatis, humeris nullo modo angulatis, striis omnibus sat profundis 3—4 et 6—7 apice abbreviatis, interstitiis convexis. Long. $5\frac{3}{4}$ mm.

Iwaki-san. Under stones by a streamlet near the summit.

At first sight appears closely allied to *T. rubens*, but in outline more nearly resembling *T. procerus* or *T. navaricus* ; head and eyes similar in shape to those of the latter, but mandibles still more elongated,

Trechus punctatostriatus, Putzeys.

Putzeys, Deutsche Ent. Zeitschr. 1877, p. 85.

Japan (*Hiller*).

Mr. Lewis does not appear to have met with this species, which differs from *T. ephippiatus* in the striæ being all entire.

Trechus vicarius.

T. suturali (Putz.) simillimus, differt oculis minus prominentibus tubereque oculari post oculum longiori et minus abrupte angustato. Breviter ovatus, elytris quam in *T. suturali* paullo brevius et latius rotundatis; castaneo-fuscus, antennis palpis pedibusque testaceo-rufis, elytris sutura et margine anguste rufis; thorace sicut in *T. suturali* transverso, late-cordato, angulis posticis fere rectis sed margine ante angulos nullo modo sinuatis; elytris, striis 4—5 distincte impressis et punctulatis cæteris obsoletis, interstitio tertio punctis magnis tribus (prima in stria quarta). Long. $3\frac{1}{4}$ mm.

Ontake.

Closely resembles *T. suturalis*, Putz., from the Pyrenees. In colour the two are the same, except that in *T. vicarius* the external margins, as well as the suture, are reddish. There are, however, minute but decided structural differences, the chief of which is the longer tumid orbit of the eye, together with the much less convex eye itself. The elytral striæ are also fainter, and some of them more abbreviated towards the apex.

Tachyta nana, Gyllenhal.

Gyllenhal, Ins. Suec., ii., p. 30; Schaum, Ins. Deutschl. I., i., p. 747.

In all the islands; commonest under beech-bark, but found sometimes under fir.

A generally-distributed insect throughout the north-temperate zone; in America it extends into the tropics as far as Guatemala.

Tachys scydmænoides, Nietner.

Nietner, Ann. Nat. Hist., xii., 1858, p. 427.

Examples taken by Mr. Lewis at Hakodate do not differ from Chinese specimens from Kiu-Kiang and Foo-chow, which agree with Mr. Nietner's description of the species from Ceylon.

Tachys reflexicollis.

Breviter ovatus elytris valde convexis; testaceo-rufus palpis et pedibus flavo-testaceis, antennis (articulis 1—3 flavis exceptis) infuscatis; elytris paullo ante apicem macula transversa indistincta fusca; sulcis frontalibus elongatis, postice usque oculi marginem posteriorem extensis; thorace relative angusto, quadrato-cordato, postice sinuato-angustato ibique margine explanato-reflexo, angulis elevatis acutis; elytris apice subacuminato-rotundatis, striis utrinque profundis et punctatis 3, quarum 2nda et 3ia apice valde abbreviatis, striis 4ta et 5ta perspicuis sed subobsoletis. Long. $2\frac{3}{4}$ —3 mm.

Near Nagasaki; shaken from bamboo refuse.

The reflexed postero-lateral margins of the thorax and raised acute hind angles distinguish this species. The elytra are as convex as in *T. globulus*, but not so steeply declivous at the apex. In general form the species resembles *T. apicalis* from Natal.

Tachys euglyptus.

Ovatus, convexus, æneus, antennis et femoribus piceis, his basi tibiis tarsisque flavo-testaceis; fronte utrinque striis impressis duabus brevibus; thorace late quadrato, antice sat rotundato postice paullo angustato sinuatoque, angulis posticis acutis supra carinatis; elytris striis omnibus valde impressis et punctatis 2—7 antice paullo, postice longius, abbreviatis, macula parva rufa ante apicem. Long. $2\frac{3}{4}$ mm.

Tokio.

Cillenum Yokohamæ.

C. laterali simile sed magis depressum, antennisque manifeste longioribus articulis singulis cylindricis. Supra olivaceo-æneum, elytris alutaceis subopacis; pedibus testaceo-rufis; antennis nigris, articulis 3-basalibus rufis, palpis rufis, maxillaribus articulis 2 apicalibus nigro-fuscis; thorace sicut in *C. laterale* sed angulis posticis obtusis nullo modo exstantibus; elytris prope basin plaga utrinque indistincta fulva, interstitiis planis. Long. $4\frac{1}{2}$ mm.

Kawasaki, near Yokohama; one example.

Lymnæum quadriimpressum, Motschulsky.

Motschulsky, Schrenck's Reisen, ii., 2, p. 90, pl. vi., fig. 8.

Bay of Avatcha; Kamchatka; Kuriles (*Motsch.*); Hakodate, under stones on the beach (*Lewis*).

Although closely allied to *L. nigropiceum*, this species is very distinct in the outline of its thorax (of which the sides are more gradually narrowed in an incurved line behind), and in its more oval elytra, brassy colour, black antennæ (except the basal joint), &c.

Bembidium (Notaphus) Batesi, Putzeys.

Putzeys, Ann. Soc. Ent. Belg., 1875.

Bembidium niloticum, Dej., Bates, Trans. Ent. Soc. Lond., 1873, p. 301.

I have again compared a Japanese specimen with a large number from Egypt and Mesopotamia, and find the slight differences between them indicated by M. Putzeys are not constant. It appears unnecessary, therefore, to separate the Japanese form. *B. opulentum*, Nietn., from Ceylon, appears to be the same species. An allied form, widely distributed in Australia (*B. Jacksoniense*, Guér.?), has a decidedly broader thorax, and other differences.

Bembidium (Notaphus) varium, Oliv.

Oliv.; Schaum, Ins. Deutschl., i., 1, p. 684.

Hakodate; six specimens.

Although much smaller than European examples— $1\frac{2}{3}$ lin., the length given by Schaum being $2-2\frac{1}{4}$ lin.—there seems no valid ground for separating the Japanese form. According to von Heyden's 'Catalog. der Coleopt. von Sibirien,' *B. varium* occurs throughout Siberia to Baikal and Kamchatka.

Bembidium (Leja) articulatum, Panzer.

Shichinohé.

Two examples, much resembling British specimens.

Bembidium (Leja) Sturmii, Panzer.

Panzer ; Schaum, Ins. Deutschl., i., 1, p. 729.

Hakodate ; three specimens.

Bembidium (Leja) xanthocera.

B. Sturmii simillimum ; sed differt antennis testaceo-flavis.

South Yezo.

Bembidium (Lopha) pædiscum.

B. 4-maculato proxime affine et simile ; differt solum pedibus pallide testaceis femoribus apice leviter infuscatis, antennisque obscure piceis articulis basalibus vix rufioribus ; viridi-æneum, elytris (ut in *B. 4-maculato*) utrinque flavo bimaculatis sed macula posteriori minore rotundata interdum obsoleta, striato punctatis striis exterioribus postice valde abbreviatis ; thorace (ut in *B. 4-maculato*) angulis posticis exstantibus. Long. 3—3½ mm.

Hakodate and Sapporo ; in dry pastures.

I have compared this species with examples of *B. 4-maculatum* from Europe, East Siberia, and North America, and find it differs constantly in its darker (and somewhat shorter) antennæ and paler legs, with slightly fuscous knees.

Bembidium tetraporum.

B. prasino, Duft., affine ; sat depressum, olivaceo-æneum elytris fusco-testaceis marginibus æneis utrinque foveis duabus latis prima apud medium ; antennis articulo primo rufo pedibus testaceo-rufis ; sulcis frontilibus latis profundis flexuosis ; thorace transversim quadrato ante basin sinuato modice angustato angulis posticis rectis, fovea basi rugulosa bistriata juxta angulum plica modice elevata ; elytrorum striis integris 1—2, 3—4 et 6—7 apice conjunctis ibique 5ta profundius insculpta et curvata. Long. 4¾ mm.

Awakisan ; Junsai ; Sapporo.

Bembidium aureofuscum.

B. prasino, Duft., affine. Angustior, parallelo-morphum, supra fusco-aureum, versus latera viridescens ; scapo rufo macula supra viridi-ænea, pedibus piceo-rufis ;

foveis frontalibus latis ; thorace quadrato-cordato sinuato-angustato, angulis posticis rectis subacutis, margine basali utrinque obliquo, fovea basali bistriata, plicaque angusta elongata prope angulum ; elytris sat profunde punctato-striatis, striis omnibus æqualiter impressis, interstitio 3io bifoveato. Long. $4\frac{1}{2}$ mm.

Nagasaki, Kumamoto, and Miyanoshita.

The elytral striæ are equally impressed throughout, a character which distinguishes the species from *B. Hio-goense*, *prasinum*, and others, to which it is otherwise allied. The two setiferous punctures of the elytra are surrounded by large impressed foveæ, almost as conspicuous as in *B. tetraporum*, but the anterior puncture is situated considerably before the middle, and not, as in *B. tetraporum*, in the middle, of the elytra.

Bembidium pliculatum.

B. aureofusco affine sed paullo minus parallelomorphum, thoracisque plica juxta angulos parva vix perspicua. Oblongo-ovatum subconvexum, æneo-nigrum, antennarum scapo interdum subtus rufescenti ; thorace subquadrato, post medium modice sinuato-angustato, angulis rectis, fovea basali utrinque profunda plicaque parva parum elevata ; elytris passim profunde punctato-striatis, interstitio 3io bipunctato, haud foveato. Long. 4— $4\frac{1}{4}$ mm.

Sapporo ; Iwakisan ; Sendai.

The striæ are all strongly impressed, as in *B. aureofuscum*, to which the species is nearest allied ; but they are more strongly and sharply punctured, and the two punctures of the 3rd interstice are not impressed in foveæ or particularly conspicuous. The colour is dark greenish brassy, antennæ, palpi, and legs being also very dark, except the scape, which in some specimens is slightly reddish underneath. The stria and fold near the hind angle of the thorax are very short and faint, but distinct under the lens.

Bembidium (Peryphus) lucillum.

B. tibiali, Dufts., affine, sed minor et magis oblongum, tibiis nigris, etc. Oblongum sat depressum, cyaneo-nigrum supra subopalescens, antennarum scapo obscure rufo ; thorace cordato-quadrato parum transverso, pos-

tice sinuato-angustato angulis acutis, fovea basali utrinque profunda plicaque sat elongata juxta angulum; elytris passim acute striatis, striis subpunctulatis, punctis utrinque majoribus duobus sat conspicuis. Long. 4 mm.

Hakone.

In the subopalescent surface gloss and dark blue colour similar to *B. lisonotum*, Bates, but differs from that species in having a thoracic fold or carina near the hind angle.

The species agrees in many respects with *B. atro-cæruleum*, Steph., but it is more parallel-sided, and differs in the elytral striæ being impressed throughout; the opalescent gloss is less visible in some examples than in others.

Bembidium (Peryphus) amaurum.

B. cæruleo, Dej., simile, sed thoracis angulis posticis exstantibus, acutis, elytris grossius punctato-striatis. Oblongo-ovatum, sat convexum, nigro-cæruleum, antennis pedibusque piceo-rufis, palpis pallide rufis; thorace rotundato-cordato postice sat profunde sinuato-angustato, angulis exstantibus, basi sparsim rugoso-punctato, fovea utrinque profundo plicaque acuta prope angulum; elytris punctato-striatis, stria 7ma paullo minus (sed usque ad apicem) impressa. Long. $5\frac{1}{2}$ —6 mm.

Hakodate.

Bembidium Nikkoense.

B. Normanno, Dej., proxime affine; paullo major, latius ovatum, pedibus rufis, etc., nigrum viridi-æneo tinctum, antennis articulis 1—2 et 3 basi pedibusque testaceo-rufis, palpis rufis, articulo penultimo fusco; sulcis frontalibus simplicibus, parallelis; thorace fere sicut in *B. Normanno* anguste cordato, basi grosse punctato, fovea utrinque basali lato et profundo, angulis posticis rectis; elytris paullo latius ovatis, striis modice impressis, 4—7 apice abbreviatis (apice lævissimo) cæteris grosse punctatis, apice concoloribus. Long. 4 mm.

Nikko.

Answers in some respects to the description of *B. misellum*, Harold; but the form of the thorax is entirely different from that of *B. velox* and *pusillum*, with which the author compares his species.

Bembidium (Peryphus) elongatum, Dej.

Dej., Sp. Gen., v., p. 148.

Hakodate ; in crevices in a moist cliff.

The thorax is broader than in specimens from South France, Madeira, and Mesopotamia, but not much broader than in one from Malaga which I have at hand for comparison, or than in examples from Imeritia. The Japanese form differs, however, in having a few punctures on the sides of the forehead, besides the central puncture. *B. thermarum*, Motsch., from East Siberia seems to be the same species.

Bembidium (Peryphus) cnemidotum.

B. cribo, Duval, affine et simillimum, sed differt pedibus fusco-testaceis tibiis albescentibus, palpisque articulo penultimo nigro. Fusco-cupreum politum, versus apicem interdum rufescens ; antennis articulis 1—2 palpisque (articulo penultimo nigro excepto) rufis, pedibus testaceo-fuscis tibiis albo-testaceis ; capite et thorace viridi-æneo tinctis, illo puncto mediano frontali, hoc sat convexo, late cordato, prope basin solum angustato-sinuato, angulis rectis, basi sicut in *B. elongato* grosse punctato et late foveato ; elytris punctato-striatis, striis 2—7 ante apicem obsoletis. Long. 5—5½ mm.

Sapporo.

Bembidium (Peryphus) oxyglymma.

B. lissonoto, Bates, et *decoro*, Panzer, affinis sed differt elytrorum striis omnibus acute insculptis, 6—7 prope apicem abrupte terminatis nec conjunctis. Parvum, oblongum, depressum, nigro-æneum, antennarum scapo rufo, pedibus palpisque basi rufo-piceis, thorace subcordato-quadrato, postice modice angustato-sinuato, angulis posticis subacutis, basi fovea sat profunda procul ab angulo sita ; elytris acute striatis (striis vix perspicue crenulatis), omnibus æqualiter insculptis, 1—5 apicem conjunctis 2 apicem attingenti, 3—4 prope apicem conjunctis, 6—7 paullulum ante apicem abrupte separatim terminatis ; punctis duobus dorsalibus conspicuis. Long. 4½—5½ mm.

Kumamoto ; Morioka.

Bembidium (Peryphus) eurygonum.

B. oxyglymmae affine et simillimum, sed differt corpore ovato nec oblongo, thoraceque magis transverso, basi latiori et angulis posticis exstantibus acutis. Oblongo-ovatum, nigro-æneum, antennarum scapo rufo, pedibus fusco-piceis; thorace late quadrato, prope basin valde sinuato modice angustato, apud angulos posticos dilatato, angulis acutis, fovea basali simplici alutacea; elytris acute striatis (striis vix perspicue punctulatis) omnibus æqualiter insculptis, 1—5 per apicem conjunctis, 2 apicem attingenti, 3—4 prope apicem conjunctis, 6—7 paullulum ante apicem separatim terminatis. Long. $5\frac{1}{2}$ mm.

Nagasaki; Kumamoto.

The relations of this species to *B. oxyglymma* are peculiar. The two seem to be found together, and are identical in colours and sculpture; but they differ distinctly in form, *B. oxyglymma* having the oblong, parallelogrammical, outline of *B. decorum* and allies, and *B. eurygonum* a broader and more ovate form, approaching *B. paludosum*; with this the thorax is distinctly broader behind, being laterally produced at the angles, which are acute. It is probable, nevertheless, that the two are varieties of one and the same species. There are males and females of both forms.

In striation the two species resemble *B. planiusculum*, Mannerh., from N.W. America.

Bembidium (Peryphus) sanatum.

B. lunato, Dufts., proxime affine, sed differt thorace multo angustiori anguste subcordato, postice valde angustato ibique lateribus fere parallelis, angulis acutis, fovea basali profundissima, punctata carinulaque elongata juxta angulum. Elongatum subgracile, olivaceo-æneum politum, palpis, antennis (versus apicem leviter infuscatis) pedibusque testaceo-rufis; elytris immaculatis, punctato-striatis, striis, suturali marginalibusque exceptis, ante apicem obsoletis ibique apice lævissimis. Long. $5\frac{1}{2}$ mm.

Niohozan; near the snow in June.

Bembidium (Peryphus) semiluitum.

B. colluto, Bates, affinissimum, forsan ejus varietas geographica; minor, antennis articulis 5—11 et 4ti basi, nigro-fuscis; elytris apice late et vage testaceo-rufis. Elongato-ovatum, viridi-æneum, palpis, antennarum articulis 1—3 et 4ti basi, pedibusque testaceo-rufis; thorace late quadrato, postice parum angustato, basi utrinque bistriato plicaque juxta angulum; elytris striato-punctatis, striis 2—7 ante apicem obsoletis, versus apicem rufescentibus, interdum toto rufo-translucentibus. Long. $4\frac{1}{2}$ mm.

Honjo; marshes.

Bembidium (Peryphus) chloreum, Bates.

Bates, Trans. Ent. Soc. Lond., 1873, p. 332.

Kumamoto and Ogura Lake. Previously recorded only from Kiu-Kiang, China.

Bembidium misellum, Harold.

Harold, Deutsche Ent. Zeitschr., 1877, p. 342.

Tokio (*Hilgendorf*).

A specimen from Wada togé, taken by Mr. Lewis, agrees fairly well with von Harold's description, except that the striæ, although strongly punctured, seem scarcely enough deeply impressed. Von Harold compares his insect to *B. velox (lampros)*, to which the Wada togé specimen is very closely allied.

Bembidium leucolenum.

Oblongo-ovatum, cupreo-fuscum lateribus viridi-æneis, antennis palpis pedibusque nigro-fuscis, tibiis testaceis; sulcis frontalibus flexuosis subparallelis, inter sulcum et oculum puncto magno setifero; thorace late quadrato-cordato, prope basin sinuato-angustato, angulis posticis subacutis, fovea basali profunda plicaque acuta juxta angulum; elytris parum convexis, punctato-striatis, striis 3—7 prope apicem obsoletis, 8—9 sat separatis sed in sulcum latum correntibus ante apicem conjunctis; femoribus sat incrassatis. Long. $5\frac{1}{2}$ mm.

Nikko; in the streets, running in the sun.

Very near *B. lampros*, but much larger and more robust. The basal rim of the elytra forms a sharp angle with the margin at the shoulder, as in *B. splendidum*.

Bembidium (Hydrium) pogonoides.

B. splendido, Sturm, affine. Oblongum, æneum nitidum, antennis (articulis basalibus rufis exceptis) femoribusque piceis, tibiis et tarsis testaceis, palpis rufis articulo penultimo piceo; thorace quam in *B. splendido* latiori, late quadrato, paullo ante medium rotundato-dilatato, deinde antice magis quam postice angustato, angulis posticis rectis, basi bistriato plicaque prope angulum; elytris humeris acutis et acute marginatis punctato-striatis, striis parum impressis 2—7 versus apicem vix perspicuis (5ta apice flexuosa et sat profunda excepta). Long. $5\frac{3}{4}$ —6 mm.

Niigata; also Eastern Siberia.

Closely allied to *B. splendidum*, which, together with many other allied species, belongs to the same section (*Hydrium*, Lec. olim) as the North-American *B. lævigatum*, Say. It differs from *B. splendidum* by its larger size, and by the thorax being much less narrowed behind; in fact, more narrowed in front and distinctly wider at the base than on the front margin.

Bembidium æneipes.

B. striato, F., multo angustior, thorace subconico, a basi usque ad apicem fere recte angustato. Supra viridauratum vix nitidum, medio cuprascens; antennis palpis pedibusque viridi-æneis; capite angusto, sulcis frontilibus longis parallellis, interspatio angusto, convexo; thorace alutaceo, medio nitido, basi utrinque striola curvata impresso; elytris angustis, a basi oblique leviter ampliatis, deinde parallelis, apice conjunctim subacute rotundatis, punctato-striatis, striis 6—7 prope humeros oblitteratis, 8—9 sat late separatis sed profundius impressis; interstitiis planis, tertio punctis parvis duobus. Long. $4\frac{1}{2}$ — $5\frac{1}{2}$ mm.

Sapporo; Chiuzenji.

Of the species known to me most nearly allied to *B. inserticeps*, Chaud., but very distinct, and approaching *B. stenoderum*, Bates; the two marginal striæ are

more widely separated, and the elytra more obliquely widened from the shoulders, than in *B. inserticeps*. The thorax is of remarkable form, much the widest at the base, and, with the exception of a very slight widening in the middle, narrowed to the apex, the apical angles advanced and acute. Dull-coloured specimens are reddish coppery, subopaque, with elytral borders widely green, and extreme margins golden. In an immature example the legs and antennæ are pitchy red.

Bembidium chloropus.

B. æneipedi affinis, sed major; toto æneum nitidum, pedibus viridi-æneis, femoribus basi tibiisque medio testaceis; antennarum scapo subtus testaceo, palpis articulo penultimo viridi-æneo; sulcis frontalibus elongatis, interspatio convexo; thorace a basi usque ad apicem modice angustato, medio paullulum dilatato, angulis anticis productis, basi alutaceo, fovea utrinque modice impressa; elytris ab humeris oblique ampliatis, deinde parallelis, apice conjunctim acuminatis; punctato-striatis, stria 7ma apud humerum obsoleta, 8—9 sat late separatis sed profundius impressis, interstitiis planis, tertio punctis duabus parvis. Long. $5\frac{3}{4}$ —6 mm.

Hakodate.

Bembidium (Bracteon) striatum, Fab.

Fab.; Schaum, Ins. Deutschl., i., 1, p. 677.

Niigata.

Trigonodactyla insignis. (Pl. XIII., fig. 6).

T. cephaloti, Dej., simillima, forsan ejus varietas geographica. Elongata, linearis, fulvo-testacea capite thorace antennisque rufo-castaneis, elytris macula ovata communi post medium nigra; capite magno fere quadrato, lævi, sulcis frontalibus postice intus curvatis; thorace cordato grosse irregulariter punctato; elytris punctato-striatis, interstitiis planis, tertio punctis setiferis parvis 3 vel 4. Long. $8\frac{1}{2}$ mm.

Yuyama; Hitoyoshi; under reeds on elevated downs.

Mr. Lewis has compared his specimens with others of *T. cephalotes* from India in the British Museum, and finds them specifically distinct. Among other distinguishing characters he remarked the impunctate

head and more deeply impressed frontal furrows; the latter curve inwardly behind, and terminate before reaching the crown; they are sharply and obliquely cut, and separated from the fine sculptured line near the eyes by a wheal, moderately elevated. The specimen figured is a variety, in which the elytral spot extends to the apex.

Casnonia litura (*Odacantha*, id.), Schmidt-Goebel.
Schmidt-Goebel, Col. Birm., p. 22.

"Virgin's Peak," Nagasaki; three specimens.

Casnonia ægrota.

C. (Odacanthæ) fulvipenni proxime affinis et simillima, sed differt statura graciliori præcipue capite post oculos rectius et longius angustato. Gracilis, nigro-fusca, capite et thorace ænescenti-nigris politis, antennis articulis 3 et 4to basi pedibusque flavo-testaceis, elytris fulvo-testaceis; capite impunctato (mandibulis palpisque piceo-rufis) thorace quam in *C. fulvipenni* paullo graciliori antice magis angustato, lævi, pronoti margine basi, prosternoque apice punctatis; elytris punctato-striatis, striis basi parum versus latera et apicem nullo modo, impressis. Long. 7 mm.

Niigata; Honjo.

Extremely near *C. fulvipennis*, which, if I have determined the species rightly, is found at Hong-Kong, and not in Celebes, as stated by Chaudoir. It differs, however, a little in form, the head in both sexes being more straightly narrowed, and appearing longer behind the eyes. The margins of the pronotum also have only a row of large punctures, few in number, instead of being thickly punctured, and the thorax seems to taper more gradually in front.

Chaudoir gives no reason for placing his species in *Odacantha* rather than in *Casnonia*. It is certainly much more nearly related to the group of *Casnonia* of which *C. fuscipennis* is the type, than to *Odacantha melanura*. There appears, however, to be no structural differences between the two genera, the shorter and more oblong form of the thorax and slightly thicker palpi in *Odacantha* being the only perceptible difference.

Drypta Japonica.

Drypta lineola, Dej., var. *Japonica*, Bates, Trans. Ent. Soc. Lond., 1873, p. 303.

Abundant at Tokio, Kioto, Osaka, Nara, Niigata, and other places, among reeds in marshes.

Mr. Lewis has convinced himself, on the comparison of a long series, that this form is very distinct from *D. lineola*, Dej. Baron Chaudoir (Bull. Mosc., 1877, i., 262), is correct in saying that the Chinese examples of *lineola* with which I compared *D. Japonica* are his *D. virgata*, but he committed an error regarding *D. Japonica* which is unintelligible; the differences stated in my description are accurate, and hold good over a large series of examples.

Drypta fulveola.

D. distinctæ affinis sed differt corpore supra toto badio-fulvo, elytris vix perspicue fusco-marginatis; subtus capite, pro- et mesothorace, coxis et trochanteribus fulvis; metathorace abdomine et pedibus chalybeis; antennis fulvis scapo et articulo tertio dimidio apicali chalybeo. Long. 9 mm.

Honjo, in Tokio; at roots of reeds. Very local.

Differs from *D. distincta* in form as well as in colour; being decidedly narrower and more slender in all its parts; the interstices of the elytra also are more strongly punctured.

Dendrocellus geniculatus, Klug.

Klug, Jahrb., i., p. 52.

Yuyama; in bundles of a reedy grass on elevated slopes, cut for roofing purposes. Also Burma, Assam, Java.

Brachinus æneicostis.

B. stenodero, Bates, affinis sed angustior, elongatus subgracilis, elytris obscure viridi-æneis subopacis, costis utrinque 8 angustis æneis politis, tota superficie (costis inclusis) minute granulatis; capite mox pone oculos angustato, supra punctato; thorax minus elongato. antice paullo magis rotundato-dilatato, postice sat profunde sinuatim angustato, angulis posticis acutis, dorso

crebre ruguloso-punctato, abdomine (segmento 2ndo medio rufo excepto) fusco; antennis pedibusque testaceo-rufis, articulis 3—7 leviter infuscatis; antennis minus elongatis. Long. 12 mm.

Ogura Lake; a marsh-loving species.

Catascopus ignicinctus.

C. virenti, Chaud., affinis, supra nigro-cyaneus, elytris igneo-cupreo marginatis, subtus nigro-piceus, antennis palpisque apice piceo-rufis; fronte utrinque (prope oculus) pluristriata, medio epistomate et collo lævibus; vertice punctato; thorace postice valde sinuatim-angustato, angulis posticis acutis, dorso leviter striguloso; elytris sat late quadratis, apice ad suturam obtusissimis, extus haud angulatis, dorso punctato-striatis, interstitiis planis, 5to angustato modice convexo, 7to carinato, 8—9 igneo-cupreis. Long. 10½—12 mm.

Yuyama and Konose; under bark.

Lioptera erotyloides. (Pl. XIII., fig. 5).

Late oblongo-ovata parum convexa, nigra, subopaca, elytris fere lævibus sericeo-nitentibus utrinque maculis vel fasciis multidentatis rufis duabus, altera basali altera paullo ante apicem; capite coriaceo, versus oculos ruguloso; thorace valde transverso lateribus angulisque anticis valde rotundatis, margine late explanato, angulis posticis subrectis, supra opaco coriaceo; elytris subtilissime striato-punctulatis, interstitiis planissimis et subtilissime punctulatis, apice oblique sinuato-truncatis. Long. 11 mm.

Yuyama, in fungi on trees; and one example at Junsai.

The red markings of the elytra are similar in form to those of *Episcapha* and allied genera of *Erotylidæ*. The basal spot has three denticulations on its posterior margin, and anteriorly emits a branch which extends to the base and shoulder; the posterior spot or fascia extends across the elytron, but without reaching the suture or margin, and is dentate on both its edges. The species fits but imperfectly into Chaudoir's genus, and differs in many important points from the only other one known, *L. quadriguttata* from the Philippines. I have had for some years in my collection a

large species from Borneo very closely allied to *L. erotyloides*, differing chiefly in the total absence of striae or rows of punctures.*

Coptodera Japonica. (Pl. XIII., fig. 4).

C. piligeræ, Chaud., simillima, sed differt thorace multo latiori et postice minus angustato. Late oblonga, castaneo-fusca, partibus oris, antennis pedibusque obscure rufis, femoribus tibiisque plus minusve infuscatis. elytris utrinque maculis angulosis duabus fulvis, altera prope basin interstitia 3—7 (interdum 4—6 vel 4—5 solum) tegentibus altera prope apicem apud interstitia 2—8, fasciam dentatam flexuosam formanti; thorace valde transverso, mox a collo late rotundato post medium modice et vix sinuatim angustato, angulis posticis rectis, margine explanato-elevato plus minusve rufescenti; elytris apice parum oblique et sinuatim truncatis, subpunctulatim striatis, interstitiis omnibus æqualiter convexis. Long. 9—10 mm.

Kiushiu, elevated forests, in fungi.

Allied to *C. subapicalis*, Putz., and *C. piligera*, Chaud., the latter of which appears to be undescribed. It has been communicated to me by M. René Oberthur as bearing that name in the Chaudoir collection, and as having been taken by Père David in China.

Coptodera subapicalis, Putzeys.

Putzeys, Deutsche Ent. Zeitschr., 1877, p. 84.

Hagi (*Hiller*). In all the islands, rather common in old trees in winter, and on foliage in summer.

Mochtherus luctuosus, Putzeys.

Putzeys, Ann. Soc. Ent. Belg., 1875 (vol. xviii.), p. 9.

Kiushiu and south of main island.

Lioptera Plato. Magna, late-ovata parum convexa, nigra fere opaca, elytris utrinque signatura angusta tiramosa prope basin et humerum, altera transversa (antice ramum unicum postice ramos duo emittenti) rufis; capite et thorace coraceis et strigulosis, hoc valde transverso, lateribus late explanato-reflexis, postice parum angustato, angulis posticis vix rectis; elytris subtilissime punctulatis striis omnibus obsoletis. Long. 18 mm. North Borneo.

Dolichoctis ornatellus.

D. quadriplagiata, Mots., affinis sed multo minor thoraceque medio angulato, etc. Sat elongato-ovata, castaneo-fusca (subtus pallidior) capite thoraceque interdum castaneo-rufis, elytris utrinque maculis duabus rotundis fulvis; antennis, palpis, thoracis elytrorumque marginibus pedibusque testaceo-fulvis, femoribus tibiisque interdum infuscatis; capite subtilissime striguloso, subopaco; thorace sat elongato, paullo ante medium angulatim dilatato, deinde antice magis quam postice subrecte angustato, angulis posticis fere rectis, dorso striguloso sat nitido; elytris apice sinuato-truncatis, angulis haud dentatis, dorso striatis, interstitiis planis. Long. 5—5½ mm.

Yuyama and other places in Higo.

Very near *D. (Mochtherus) rotundata*, Schmidt-Goebel, but apparently distinct. There are several other closely-allied species in the Indo-Malayan region.

Dromius prolixus.

D. quadraticollis (Moraw.), Bates, Trans. Ent. Soc. Lond., 1873, p. 307.

D. agile, F., multo magis elongatus et relative angustior, supra castaneo-fuscus subtus castaneo-rufus, partibus oris, antennis et pedibus fulvo-testaceis; capite parvo, ovato, palpis gracilibus acuminatis; thorace anguste quadrato, antice vix rotundato, postice parum angustato, subsinuato, angulis posticis fere rectis; elytris angustis, elongatis, postice gradatim sed perparum dilatatis, apice recte sinuato-truncatis, sat profunde subpunctulatim striatis, interstitiis subconvexis, subtilissime alutaceis, nitidis, 7mo pluripunctato. Long. 6½—7½ mm.

Junsai; Kawachi; Nikko.

I had formerly referred this species to *D. quadraticollis*, Moraw., from the Amur, but it is clearly distinct, though very closely allied, the antennæ not answering to Morawitz's description "antennarum basi pedibusque ferrugineis," but being unicolorous tawny-red. The outline of the thorax varies a little; in specimens from Nikko it is distinctly narrowed from the slight anterior rounding to the base, and the posterior angles are very

slightly prominent; but in others from Kawachi it is as wide at the base as in front, and the angles are more prominent. All intermediate gradations occur, and the following may be only an extreme form.

Dromius campanulatus.

Paullo minus elongatus; thorace campanuliformi, basi dilatato; cæteris ut in *D. prolixo*. Long. $5\frac{1}{2}$ — $6\frac{1}{2}$ mm.

Higo; Fukushima; Miyanoshita and Kiga.

The thorax is much the widest at the hind angles, being narrowed thence, first in a straight and then in a curved line to the anterior margin. As some gradations occur, I doubt whether it keeps itself as a distinct species from *D. prolixus*.

Dromius breviceps.

D. agile affinis, magis elongatus; a *D. prolixo* et *D. agile* differt capite ante oculos multo abbreviato, obtuso, labro mandibulisque brevibus, palpis crassis, articulo ultimo elongato-ovato prope apicem lateraliter excavato; elongato-oblongus, nigro-piceus, antennis palpis pedibusque fulvo-testaceis; femoribus flavescens; capite brevissimo, post oculos nec rotundato, recte angustato, fronte multi-rugulosa; thorace quadrato, antice fere ut in *D. agile* usque ad collum modice rotundato, sed postice minime angustato, angulis posticis elevatis apice rotundatis, dorso striguloso; elytris parallelis, apice fere recte truncatis, striis vix impressis interstitiis convexis. Long. 7 mm.

Yokohama, under *Celtis* bark.

Very distinct from *D. prolixus* and *campanulatus*. Colour above wholly pitchy black, with a silky gloss; legs yellowish testaceous; palpi thick, last joint ovoid; head much shortened anteriorly, rounded, and obtuse; elytral striæ very faint and not perceptibly punctulated, &c. It is much more nearly allied to a Central American species, *D. Guatemalenæ*, Bates; the row of punctures on the 7th interstice is scarcely visible.

Dromius crassipalpis.

D. brevicipiti proxime affinis, minus elongatus, quoad formam *D. agili* similis, supra nigro-piceus, thorace interdum rufescenti; antennis, partibus oris pedibusque

fulvo-testaceis; capite antice modice elongato, fronte lævi; thorace quadrato, postice sinuato-angustato, margine explanato-subreflexo, angulis posticis fere rectis; elytris apice leviter sinuatis, striis acutius quam in *D. agile* impressis, interstitiis convexis alutaceis, 3io et 7mo seriato-punctatis. Variat pedibus piceo-rufis. Long. 6—7 mm.

Oyama, in Sagami.

Resembles *D. agilis*, but the head is perfectly smooth above and not rounded behind the eyes, and the thorax is less narrowed behind, with sinuated margins and nearly rectangular hind angles. Palpi thickened as in *D. breviceps*.

Blechrus glabratus, Duftsch.

Duftsch., Schaum, Ins. Deutschl., i., 1, p. 275.

Junsai; Sapporo.

A universally-distributed insect in the north-temperate zone; in America ranging as far south as Mexico.

Blechrus maurus, Sturm.

Sturm, Schaum, *l. c.*, p. 276.

Bukenji; in dry arable fields early in spring.

Rather more distinctly striated than European examples usually are.

Metabletus quadripunctatus, Schmidt-Goebel.

Schmidt-Goebel, Col. Birm., p. 39. ?

Yuyama.

A single specimen agreeing with Schmidt-Goebel's description, except with regard to the punctures on the 3rd interstice, which, according to him, are two in number, one in the middle, the other far behind,—in fact as in *D. foveola* and *inæqualis*. The single Japanese example is evidently an aberration, as there are two punctures on the left elytron and four on the right. It would be unsafe to found a new species on a unique specimen in doubtful condition.

Demetrias marginicollis.

D. atricapillo longior, præcipue capite et thorace magis elongatis, illo post oculos prolongato perparum rotundato, hoc ante basin vix sinuato angulis posticis obtusis; flavo-testaceus, capite nigro epistomate partibusque oris rufis, thoracis marginibus lateralibus anguste nigrofuscis, elytrorum sutura fusca; capite impunctato; elytris punctulato-striatis, striis versus latera minime impressis. Long. $5\frac{1}{2}$ mm.

Miyanoshita, Honjo, and Nowata.

In the elongate head and thorax agrees with *D. Amurensis*, Motsch. (= *sibiricus*, Mor.?) and *D. longicollis*, Chaud., from Eastern Siberia. But in the description of neither is any mention made of the fine brown margins of the thorax, which distinguishes the Japanese form; from *D. longicollis* besides, of which I possess a specimen, it differs in many points. The dusky streak along the suture covers one interstice near the base and widens to two interstices from the middle to near the apex.

Lachnoderma asperum. (Pl. XIII., fig. 2).

Oblongum dense erecte pubescens, nigrum nitidum, elytris, unguibus, abdominisque apice castaneo-rufis; capite grosse punctato medio sublævi; oculis valde prominentibus; thorace lato et brevi, basi lobato, antice explanato-dilatato, rotundato, medio angulato, deinde postice valde sinuato-angustato, angulis posticis productis acutis, limbo toto grosse scabroso-punctato, disco lævi; elytris striato-punctatis, punctis profundissimis, interstitiis sparsim punctulatis, apice transversim truncatis, angulis exterioribus valde rotundatis; tarsis supra pubescentibus, articulo 4to bilobato; unguibus basi dilatatis et longe pectinatis. Long. 8 mm.

Above Miyanoshita. One example under a stone; another, partly eaten, in an ant's nest; May 3rd, 1880.

I refer this curious species to the genus *Lachnoderma*, instituted by W. Macleay for an Australian species in Trans. Ent. Soc., N. S. W., vol. ii., p. 321. *Singilis hirsutus*, Bates, Trans. Ent. Soc. Lond., 1873, p. 333, from Hong-Kong, is another species of the same genus. Chaudoir referred *Lachnoderma* to his subgroup *Physoderides*.

Pentagonica angulosa.

P. subcordicollis, Bates, similis sed differt ab omnibus affinibus thorace utrinque biangulato; nigro-nitida, partibus oris pedibusque flavo-testaceis, antennis piceofuscis, articulis 2 basalibus pallidioribus, thorace elytrorumque marginibus angustis rufescentibus; thorace valde transverso, postice ab angulo laterali explanato-marginato, ante basin obtuse angulato, deinde usque ad basin sinuato; elytris punctulato-striatis, interstitiis sat convexis. Long. 5 mm.

Yuyama; Kashiwagi; Nikko; always in or about fungi.

The second angle on the sides of the thorax is distinct also in *P. hexagona*, Woll., and *P. suturalis*, Schaum, but in no species is it so well developed as in *P. angulosa*, the explanated margin forming a distinct projection.

Lebia fusca, Morawitz.

Bates, Trans. Ent. Soc. Lond., 1873, p. 318.

Miyanoshita and in Yezo.

Described by Morawitz from examples taken at Hakodate. The fourth tarsal joint, as stated by the describer, is bilobed.

Lebia duplex.

L. fusca simillima, sed differt tarsorum articulo 4to emarginato nec bilobato, thorace et elytris haud distincte rufo-marginatis. Long. $7\frac{1}{2}$ mm.

On all the islands; on foliage in May.

So near to *L. fusca* that there is scarcely any means of distinguishing it except by the important structural character of a simply emarginated fourth tarsal joint, the same joint having two fully-developed lobes in *L. fusca*. The form of every other part is as near as can be the same; but there appears to be a constant difference in the margins of the elytra and thorax being concolorous with the rest of the surface in *L. duplex* and reddish in *L. fusca*. The elytra have deep impunctate striæ, with convex interstices, in both species.

Lebia sylvarum.

L. japonicæ affinis; *L. idæ* ejus sectionis similis, thorace castaneo-rufo testaceo-marginato, sed differt elytris prope apicem flavo-fasciatis. Supra piceo-nigra nitida, thorace castaneo-rufo, testaceo-rufo marginato, elytris macula magna angulata anteriori discoidali fasciaque prope apicem (antice unidentata) margineque testaceo-flavis; partibus oris, antennis pedibusque testaceo-rufis; corpore subtus flavo-testaceo; oculis prominentibus, capite fere lævi; thorace transversim quadrato, postice vix angustato, margine explanato-reflexo recto, angulis posticis haud productis subrectis, dorso subtiliter ruguloso; elytris profunde striatis, interstitiis convexis; tarsorum articulo 4to bilobato. Long. $6\frac{1}{4}$ mm.

Higo; in moist forests at an elevation of 2000 feet.

Lebia Iolanthe.

L. japonica minor et angustior, oblonga, supra nigra, thorace rufo, antennis palpisque nigris illarum articulis 2 basalibus fusco-testaceis, elytris margine laterale et apicale maculisque ovalibus utrinque duabus (prima discoidali ante medium, secunda apicali juxta suturam) flavo-testaceis; corpore subtus pedibusque flavo-testaceis; capite subtilissime punctulato, prope oculos ruguloso, oculis prominentibus; thorace transversim quadrato, postice perparum angustato, margine explanato-reflexo, sinuato, angulis posticis acutis, dorso subtilissime coriaceo; elytris acute striatis, interstitiis subconvexis alutaceis; tarsorum articulo 4to bilobato. Long. $5\frac{1}{2}$ mm.

Ontake; Subashiri; on *Arctium*.

ADDENDA.

The following species, overlooked by Mr. Lewis on the first arrangement of his new material, have to be added to the foregoing Supplement. They include one Palæ-arctic genus, *Penetretus*, new to the Japanese fauna, and increase the total number of described species to 408:—

Eucalathus atricolor.

E. æneolo angustior, piceo-niger, antennis partibus oris pedibusque piceo-rufis, femoribus paullo obscurioribus; thorace potius ovato quam quadrato, postice magis quam antice angustato, angulis posticis rotundatis; elytris profunde striatis, interstitiis convexis; tarsis posticis subtus parce hirsutis. Long. 11—13 mm.

Chiuzenji; Nikko; Nara; in damp shady forests.

The thinner clothing of hairs on the soles of the hinder tarsi prove that the dense clothing is not an essential generic character, this species belonging certainly to the same group as *E. æneolus*. In immature examples the legs and antennæ are tawny testaceous. Some examples are of very slender form, narrower in proportion than *Calathus Solieri*.

Pristodactyla crocata.

P. cathaicæ affinis; gracilior, nigro-picea, antennis partibus oris pedibusque fulvescenti-croceis; thorace sat elongato, lateribus modice rotundatis, ante angulos posticos perparum sinuato, angulis distinctis sed obtusissimis, margine anguste explanato plus minusve rufescenti; elytris oblongis, acute striatis, interstitiis ♂ subconvexis, ♀ planis margine interdum rufescenti; palporum articulo ultimo elongato, versus apicem leviter dilatato, apice truncato. Long. 12—14 mm., ♂, ♀.

Hakodate; Yokohama.

Two small males (9—11 mm.), taken at Sannohe, differ in their rather slenderer form, with sides of thorax much less rounded.

Colpodes eurydamas.

Late ovatus, modice convexus, supra nigra nitida elytris olivaceis subopalescentibus, antennis palpis tibiis et tarsis piceo-rufis; capite lævi, post oculos parvos modice prominentes oblique angustato, collo sat crasso nec constricto; thorace paullo ante medium subangulatim dilatato, antice recte angustato, angulis anticis productis, postice sinuatim angustato, angulis posticis rectis, marginibus explanato-reflexis; elytris latis apice late rotundatis, sinuatis, dorso striatis, interstitiis planis, tertio 3-punctato; tarsis omnibus articulo 4to emargi-

nato (angulo exteriori longiori); posticis utrinque sulcatis; mesothoracis episternis modice elongatis, latis. Long. $11\frac{1}{2}$ mm., ♀.

Yuyama; two examples.

Unlike any other *Colpodes* known to me, and difficult to place in any of Chaudoir's sections. The length of the metathoracic episterna approaches that of the species of his third chief section, but they are much broader than in the numerous American species.

Colpodes Pryeri.

C. splendenti et *C. amæno* proxime affinis; aliter coloratus, subtus antennis pedibusque piceis, supra olivaceo-æneus politus, femoribus et palpis castaneo-rufis; tarsis omnibus supra bicarinatis, elytris apice suturali dentatis. Long, $12\frac{1}{2}$ mm.

Oyama (Mr. Pryer).

The elytra are more brilliantly brassy olivaceous than the head and thorax, and the under side is pitchy black, instead of red as in *C. splendens* and *C. amænus*; the sides of the thorax are less explanated and scarcely reddish.

Diplous depressus.

Patrobis depressus, Dejean, Sp. Gen. Col., v., p. 705; Chaudoir, Essai Monogr. s. l. groupe des *Pogonides*, p. 33.

Kashiwagi, river-bed on road to Shingu.

Mr. Lewis' specimens do not differ from others with which I have compared them from East Siberia.

Penetretus ambiguus.

Deltomero tatrigo similis, paullo robustior; elongatus, subgracilis, nigro-piceus, glaber, subtus rufo-piceus, partibus oris, antennis pedibusque rufis; capite fere lævi, longe post oculos constricto; thorace fere sicut in *P. rufipenni* cordato, antice minus rotundato, basi parce punctato; elytris elongato-ovatis, versus basin gradatim angustatis, striatis, striis indistincte punctulatis; tarsis supra glabris. Long. 9—10 mm.

Summit of Ontake, July 29th, 1881.

Belongs to *Penetretus* by the glabrous upper surface of the tarsi, but in form and facies more resembling *Deltomerus*; the facies is something between *Patrobus excavatus* and *Deltomerus tatricus*.

Penetretus dilatatus.

P. ambigu brevior et latior; piceo-niger, antennis partibus oris pedibusque picescenti-rufis; capite fere lævi; thorace late cordato, antice valde rotundato, postice sinuatim angustato, angulis posticis acutissimis, basi et lateribus punctatis; elytris latius ovatis, subpunctulato-striatis. Long. $8\frac{1}{2}$ mm.

Shimidzu-toge. One example (male) only.

Stomonaxus læviventris.

S. striatocolli similis sed angustior, elytris oblongis, subtus toto corpore lævissimo; piceo-niger, thoracis lateribus postice et angulis rectis; elytris lævi-sulcatis, apice juxta suturam vix rufescenti; antennis, partibus oris, pedibus, segmentisque 3 ultimis ventralibus, piceo-fulvis. Long. $5\frac{1}{2}$ mm.

Hakone; many examples in decaying beeches. Head and thorax sometimes rusty red.

EXPLANATION OF PLATE XIII.

- FIG. 1. *Cicindela ovipennis*.
2. *Lachnoderma asperum*.
3. *Carabus grandis*.
4. *Coptodera Japonica*.
5. *Lioptera erotyloides*.
6. *Trigonodactyla insignis*.
7. *Broscosoma elegans*.



Bates, Henry Walter. 1883. "XI. Supplement to the Geodephagous Coleoptera of Japan, chiefly from the collection of Mr. George Lewis, made during his second visit, from February, 1880, to September, 1881." *Transactions of the Entomological Society of London* 31, 205–290.

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