

Article XX.—NOTES ON SOME BEETLES FROM THE
BLACK MOUNTAINS, WITH DESCRIPTIONS
OF NEW SPECIES.

By WILLIAM BEUTENMÜLLER.

PLATES XLVIII AND XLIX.

Through the kindness and generosity of the late Very Rev. E. A. Hoffman, and Mr. Samuel V. Hoffman, the writer was enabled to make two expeditions to the Black Mountains, in western North Carolina, and adjacent ranges, in June and July, 1902, and May and June, 1903.

Three previous trips to the same general region were made in the interest of the Museum during August and September, 1895, July and August, 1900, and September and October, 1901.

In the course of these expeditions the following peaks have been explored by me in quest of insects: Mount Graybeard, Rocky Knob, and Toe River Gap in the Blue Ridge, which form the connecting link between the Blue Ridge and the Black Mountains; Cedar Pinnacle, Potato Knob, Clingman's Peak, Mount Gibbs, Steps Gap, Mount Hallback, Mount Mitchell, and Black Brothers, in the Black Mountains; and Bull's Head and Craggy Dome in the Craggy Range. The valleys as far as Balsam Gap in the Black Mountains, the Swannanoa Valley as far as Asheville, as well as other hollows and ravines, have been explored by me.

The forests of the Black Mountains are characterized by a dense growth of balsam fir (*Abies frazeri*) and black spruce (*Picea mariana*). In certain places they contain also mountain ash (*Pyrus americana*), wild red cherry (*Prunus pennsylvanica*), hemlock (*Tsuga canadensis*), mountain maple (*Acer spicatum*), and rhododendron (*R. catawbiense*). The summits and slopes of the mountains are covered with a deep layer of damp moss, and the ground is strewn with fallen timber in various stages of decay. The Black Mountains derive their name from the dark foliage of the evergreens. The lowlands

are covered principally with red oak, white oak, sweet birch, locust, butternut, buckeye, tulip tree, hickory, laurel, rhododendron (*R. maximum*), and the fiery azalea (*A. lutea*).

The following are a few studies on some of the species taken in this interesting region, together with a description of a new *Platynus* from Retreat, Hayward County, N. C.

***Nomaretus debilis*, var. *alpinus*, var. nov.**

PLATE XLIX, FIGS. 3, 5.

Five examples of this form were taken under stones and bark of trees in the valley and on the summit of the Black Mountains in June and September. The type form of *N. debilis* is a single male taken in Habersham County, Georgia. This form has the elytral striæ profoundly crenate or punctate, as shown on Plate XLIX, Fig. 4, which was drawn from the type in the Leconte collection. It measures 10 mm. in length and $3\frac{1}{3}$ mm. in width. The form taken by me in the Black Mountains is somewhat larger and more robust, and has the first, second, and third striæ only indistinctly crenate to a little beyond the middle. The remaining striæ are smooth and without punctures. Length of male, 10–11 mm.; width, $3\frac{1}{3}$ –4 mm. Length of female, 12 mm.; width, 4 mm. I consider this form to be nothing more than a mountain race of *debilis*. Plate XLIX, Fig. 5, shows the anterior tarsus of the male.

***Nomaretus imperfectus* Horn.**

PLATE XLIX, FIG. 2.

A number of specimens of this species were taken in the valley of the Black Mountains. It occurs under decayed leaves in rhododendron thickets along the banks of slow running streams and is found very rarely under stones. It may be obtained by sifting.

***Nomaretus hubbardii* Schw.**

PLATE XLIX, FIG. 6.

Two females which I suppose to belong to *N. hubbardii* were taken in the Black Mountains, one in the valley and the other

on the summit of Mount Mitchell, altitude 6717 feet. It is possible that these may prove to be a new form.

***Cychrus viduus*, var. *irregularis*, var. nov.**

PLATE XLVIII, FIGS. 5, 6, 7.

Shape of *C. viduus*. Deep purplish black or almost black above. Deep black beneath. Elytra with the intervals more or less broken alternately, and forming irregular, elevated reticulations; punctures large and deep. Length of male, 25-29 mm.; female, 28-30 mm.

Habitat. — Summit of Black Mountains, North Carolina, Roan Mountains, Tenn., and Clingman's Dome, Smoky Mountains, Tenn.

Described from four males and three females from the Black Mountains. Types, Coll. Am. Mus. Nat. Hist. In *C. viduus* (Plate XLVII, Figs. 8 and 9) the color is purple, the striæ are regular and less coarsely punctured, and the intervals are complete and regular in their course. The anterior tarsi of the male are like *viduus* (Plate XLVIII, Fig. 7). Specimens of this form from the mountains in Tennessee are also in the collection of Mr. Wenzel.

***Cychrus guyoti* Lec.**

PLATE XLVIII, FIGS. 1, 2, 3, 4.

Five males and three females of this rare species were taken on the summits of the Black Mountains, during May, June, and July. The type in the Leconte collection is an immature female from the same region. Plate XLVIII, Figs. 3 and 4, were drawn from the type. The first joint of the anterior tarsi of the male (Plate, XLVIII, Fig. 2) is very long, narrow, and scarcely dilated at the tip, as in the other eastern species of the genus. The 9th, 10th, and 11th intervals of the elytra from before the middle to the tip are more or less irregularly broken.

***Cychrus violaceus* Lec.**

PLATE XLVIII, FIGS. 10, 11.

This species should be looked for in the mountains of North Carolina, but my search so far to discover it has not [September, 1903.]

been successful. The type in Leconte's collection is a single male from the mountains in Georgia. A specimen from the mountains in North Carolina (Plate XLVIII, Fig. 12) before me agrees in all respects with the type of *violaceus* except that the thorax in my specimens is broader. The anterior tarsi, color, and sculpture are the same. In color *violaceus* is like *C. andrewsii* from North Carolina, but the first joint of the anterior tarsi (Plate XLVIII, Fig. 11) is longer and less clothed with pubescence. *Violaceus* was placed by the late Dr. Horn as a variety of *C. viduus* (Trans. Am. Ent. Soc., Vol. VIII, p. 173). It certainly is not a variety of this species, but more likely of *C. andrewsii*. I would propose to give *C. violaceus* specific standing until more evidence and material are at hand to unite it with *C. viduus* or *C. andrewsii*. Figures 10 and 11 on Plate XLVIII are from Leconte's type in the Cambridge Museum.

Cychrus andrewsii Harris.

PLATE XLVIII, FIG. 7, AND PLATE XLIX, FIG. 1.

Cychrus andrewsii HARRIS, Boston Journ. Nat. Hist., Vol. II, 1839, p. 195.

The original description of this species is as follows:

"Black; thorax deep greenish blue, heart-shaped, narrowed behind, and slightly margined at the sides; elytra deep blue, faintly tinged with violet, slightly carinated at the base and sides, and with punctured striæ.

"Length, including the mandibles, nine and a half lines.

"Head, blue black, smooth, obsoletely wrinkled on the front, and impunctured. Thorax, heart-shaped, very much narrowed behind, rounded at the sides, with a small elevated lateral ridge, furrowed in the middle, and slightly depressed before the base, which is covered with shallow, irregular punctures. Elytra oblong-ovate, quite convex, and very slightly carinated at the shoulders and sides; they are marked with fine and narrow punctured striæ; but the striæ become obsolete and the punctures irregular and more dilated, at tip. *Epi-pleuræ* greenish black and punctured. Body beneath black. Legs black; tarsi rust-colored.

"Inhabits North Carolina."

Twenty examples agreeing with the original description were collected by me in the valley of the Black Mountains,

principally on the slopes at the base of the mountains. My specimens vary in color from bright violet to bluish. The males measure from 17–20 mm. in length, and the females from 18–22 mm. Plate XLVIII, Fig. 14, shows the anterior tarsus of the male.

***Cychrus æneicollis*, sp. nov.**

PLATE XLVIII, FIG. 13.

Head black, very slightly greenish or purplish, finely wrinkled, especially between the eyes. Thorax greenish or purplish black, narrowed behind, lateral edge narrowly reflexed; sides rather strongly but obtusely angulated, giving a very characteristic appearance; median sulcus deep; transverse impression in front rather deep; basal impressions deep, punctulate. Elytra convex, dark greenish or purplish black, with the punctures on the striæ large, deep, and pitlike. Intervals more or less irregular, especially at the sides, where they form in some specimens a regular network. The intervals are also more or less transversely connected. Under side and legs black. Length: male, 14–19 mm.; female, 19–22 mm.

Seventy fine specimens of this mountain form of *Cychrus* are before me. They were all taken on the summit of the Black Mountains from May to October. They live in the deep, dense forests, and usually are found under loose bark. Specimens of the same form are in Mr. Wenzel's collection from the Balsam Mountains, N. C. and mountains in Tennessee. It is probably an alpine form of *andrewsii*, but differs from this species in color, form of thorax, and sculpture of the elytra. The thorax in the mountain form is strongly angulated at the sides, the striæ of the elytra have large, deep pitlike punctures, and the intervals are more irregular. In *andrewsii*, at least the North Carolina specimens, the striæ are finely punctured, with regular and continuous intervals, except at apex. *Andrewsii* is bright violet or violet blue, while in the form here described they are deep green or purple black. The thorax is also relatively narrower and the head longer than in *C. andrewsii*. The anterior tarsi are the same as in *C. andrewsii*. Whether or not it is a form of *C. andrewsii* I am not prepared to say. All my specimens were taken on the summit of the mountains, very rarely on the slopes, near the

base; while all the *C. andrewsii* were taken in the valley and not on the summit. It is found from May to late in the fall, and probably hibernates.

***Cychrus stenostomus*, var. *bicarinatus* Lec.**

In the valley of the Black Mountains and southward to Georgia this form is not uncommon. Specimens were collected by me from May to October. The type in the Leconte collection is a unique male from Habersham County, Georgia. *Cychrus stenostomus*, or var. *lecontei* is not found, as far as I am aware, in the mountains of North Carolina. *Bicarinatus*, on the average, is larger, more robust, and with the intervals of the elytra more or less carinated. The intervals are also more or less broken, forming distinct tubercles behind the middle to the apex.

***Cychrus canadensis* Chd.**

Thirty specimens of this species were taken on the summits of the Black Mountains, from May to October. It is found under bark or moss on rocks. The species does not seem to occur in the valley.

***Trechus carolinæ* Sch.**

This species was described from a single specimen taken by me on the summit of Potato Knob, in the Black Mountains. It was taken in July, by sifting the damp moss covering these mountains. On my last trip (1903), I was fortunate enough to find two additional specimens of this rare species. They were found on May 19, near the foot of Mount Mitchell, under a large stone deeply imbedded in the ground. They were probably hibernating.

***Platynus trifoveolatus*, sp. nov.**

PLATE XLIX, FIG. 7.

Head, thorax, and elytra pitchy brown; margins of the thorax, elytra, antennæ, and legs rufo-testaceous; under side of body darker. Head rather large, smooth, frontal impressions deep. Thorax longer

than broad, narrower behind than in front, sides evenly rounded before the middle, thence almost evenly oblique to the hind angles, which are rectangular; basal impressions deep and finely rugose; sides strongly reflexed, especially at the hind angles; anterior angles obtusely rounded; median impression deep. Elytra oval, convex, about a third longer than broad, sides rounded, lateral margins rather strongly reflexed, humeral angles well rounded; sinuate before the tip; striæ deep, intervals convex; lateral striæ faint. On the third interval with three foveæ.

Length, 4.75 mm.; width, 2.75 mm.

Habitat. — Pigeon River, Retreat, western North Carolina.

Types. Coll. U. S. Nat. Mus.; 2 cotypes, Am. Mus. Nat. Hist.; 2 cotypes, Am. Ent. Soc. (Horn Coll.).

Described from six specimens collected by the late H. G. Hubbard. The specimens were kindly loaned to me for study by Mr. E. A. Schwarz.

A small, oval species, resembling *Platynus ruficornis* and *P. crenistriatus* in general appearance, but the strongly reflexed margins of the thorax and other characters place it in the *sinuatus* group.

***Platynus gracilentus*, sp. nov.**

PLATE XLIX, FIG. 8.

Head as broad or almost as broad across the eyes as the broadest part of the thorax, smooth, shining. Thorax rather narrow and long, narrower behind than in front; sides reflexed, rounded in front, thence oblique to before the hind angles, where it is slightly sinuate; hind angles rounded. Median sulcus distinct, rather deep anteriorly. Basal impressions deep. Elytra very much narrower at the base than before the apex; sinuated before the tip. Striæ deep; intervals convex or more or less flattened. Color black; femora black, tibiæ and tarsi brown.

Length, 11–14 mm.

Habitat. — Summit of the Black Mountains, N. C.; altitude, 5000–6717 feet.

Types. Coll. Am. Mus. Nat. Hist.

Allied to *P. angustatus*, but differs from this species by having the thorax elongate and considerably narrower; the elytra are less ovate and narrower, especially at the base. It is also smaller, and more graceful and slender. About one hundred and fifty specimens were collected, under bark and

stones. The species does not occur in the valley, while *P. angustatus* occurs both in the valley and on the summit of the mountains. I was at first inclined to believe that this species was a form of *P. angustatus*, but in no instance could I find the two species co-habiting. They were all found apart from *P. angustatus*.

Corymbites longicornis Lec.

As far as I am aware only two specimens of this species are known to exist in collections,—one in the Leconte, and the other in the Horn collection. On the summit of Mount Graybeard, in the Blue Ridge, N. C., in May, I captured on low bushes about forty specimens of this rare species. It may be known readily by its long antennæ and slender form. In color it is very pale testaceous, with a broad black sutural line.

Anthophilax hoffmanii, sp. nov.

PLATE XLIX, FIGS. 9, 10.

Male: Head and thorax brassy black or purplish. Antennæ black. Elytra bright shining green, red laterally; scutellum black. Underside black or brassy black with very short whitish hairs. Legs brassy black, pubescent; tibiæ somewhat rufous basally. Head rugose, with a median sulcus in front, carinate on each side from below the antennæ to the mandibles. Thorax deeply rugose, narrower in front than behind; a median depression on the anterior half and a transverse, smooth ridge near the base. Anterior portion somewhat constricted; hind angles rather prominent, produced by the lateral depression. On each side at the middle is a prominent spine-like protuberance. Antennæ fully as long as the body. Elytra rugosely reticulated; humeri prominent. Underside very finely rugose. Length, 13–15 mm.

Female: Color same as in the male, but considerably larger and more robust. The hind angles of the thorax are considerably more produced and the lateral protuberances are longer and more pointed. The red on the sides is also narrower, and the antennæ reach to one third from the tip of the elytra. Length, 18–20 mm.

Habitat. — Summits of the Black Mountains, western North Carolina, June 26–July 11, 1902.

Types. Coll. Am. Mus. Nat. Hist. One female cotype, Coll. Am. Ent. Soc.

Described from two males and four females. Dr. Van Dyke, who was with me on this trip, captured also one male and three females of this beautiful longicorn.

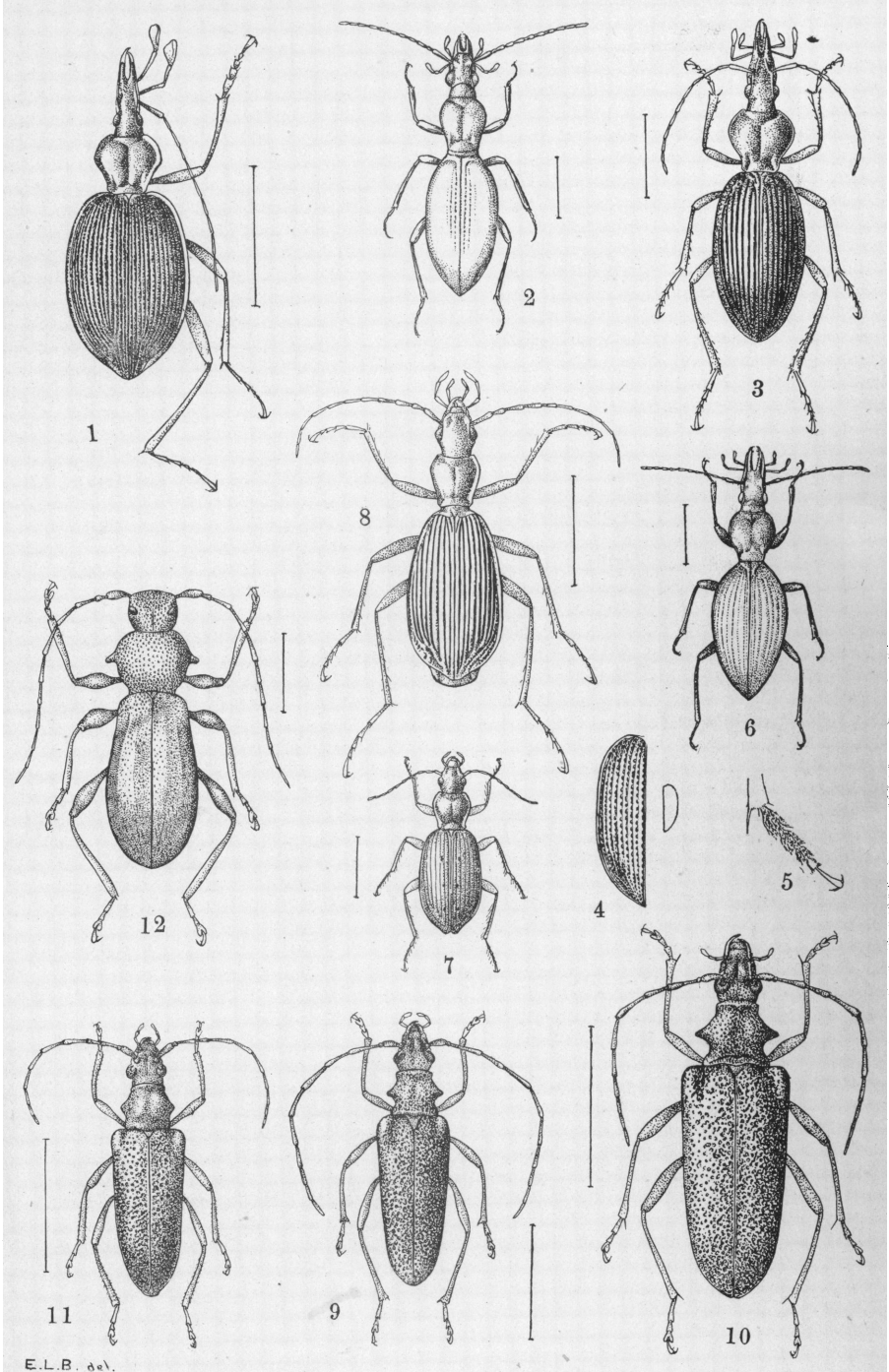
The species was found only on the balsam fir (*Abies frazeri*), on which a female was found ovipositing.

It is allied to *Anthophilax viridis* (Plate XLIX, Fig. 11) and *malachiticus*, but differs from these species by having the thorax considerably broader behind, the sides more oblique, and the lateral protuberance considerably more prominent, especially in the female. It is also a larger and more robust insect. I take pleasure in naming this species in honor of the late Very Rev. E. A. Hoffman.

***Michthysoma heterodoxum* Lec.**

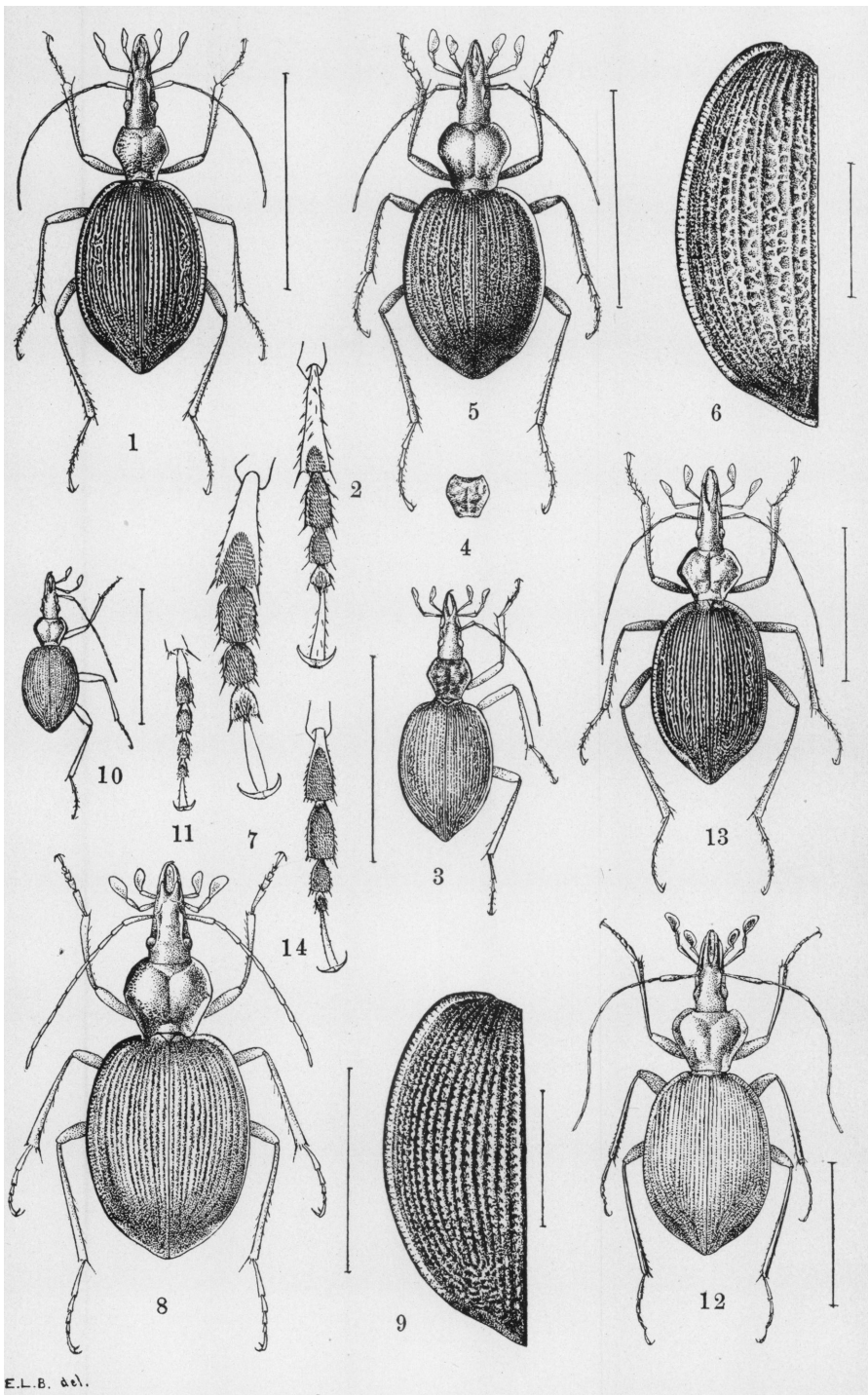
PLATE XLIX, FIG. 12.

Twelve specimens of this curious ant-like longicorn were collected in the valley of the Black Mountains and on the summit of Mount Graybeard of the Blue Ridge. It was found running on the trunks of oak and chestnut trees. In shape and habits it resembles black ants.



E. L. B. del.

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|---|---|---------|
| 1. <i>Cychrus andrewsii</i> . | 7. <i>Platynus trifoveolatus</i> , sp. nov. | |
| 2. <i>Nomaretus imperfectus</i> . | 8. " <i>gracilentus</i> , sp. nov. | |
| 3. " <i>debilis</i> , var. <i>alpinus</i> , var. nov. | 9. <i>Anthophilax hoffmanii</i> , sp. nov. | Male. |
| 4. " " <i>elytra</i> . | 10. " " <i>viridis</i> . | Female. |
| 5. " " <i>anterior tarsus</i> , male. | | |
| 6. " <i>hubbardii</i> . | 12. <i>Michthysoma heterodoxum</i> . | |



E. L. B. del.

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| 1. <i>Cychrus guyoti</i> . Female. | 8. <i>Cychrus viduus</i> . |
| 2. " " anterior tarsus. Male. | 9. " " elytra. |
| 3. " " Female. | 10. " " violaceus. |
| 4. " " thorax. | 11. " " anterior tarsus. Male. |
| 5. " " <i>viduus</i> var. <i>irregularis</i> , var. nov. | 12. " " var. |
| 6. " " <i>irregularis</i> , elytra. | 13. " " <i>æneicollis</i> , sp. nov. Male. |
| 7. " " var. <i>irregularis</i> , anterior tarsus. Male. | 14. " " anterior tarsus. Male. |

