

Taxonomic Status of *Catops luridipennis* Mann. and *Catops  
brunneipennis* Mann. (Coleoptera, Catopidae)

by

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**Summary.** In this paper *Catops luridipennis* Mann. has been acknowledged to be a distinct species and *C. brunneipennis* Mann. its synonym. The lectotype of *C. brunneipennis* Mann. has been designated.

The objective of this note is the solution of the problem of taxonomic status of *Catops luridipennis* Mann. and *C. brunneipennis* Mann., which species have hitherto been synonymized in various ways. Morphology and subspecific differentiation, the analysis of which would call for examination of rather abundant material, have been treated here only to a slight extent.

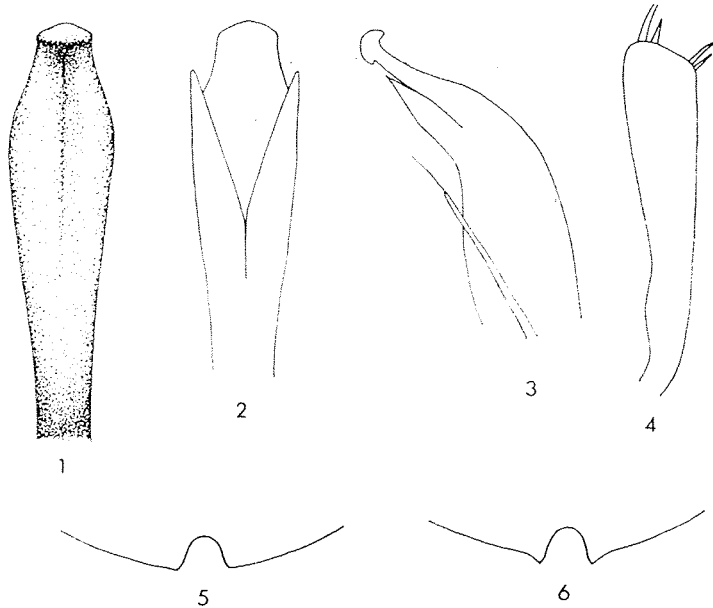
Both these species have been described by Mannerheim [5] from Kenai Peninsula in southern Alaska. Mannerheim admitted *C. luridipennis* to be closely related to *C. brunneipennis*, from which it differs, according to him, in its somewhat shorter body, thicker antennae, shorter pronotum with more rounded sides, and the elytra rounded at the apex.

Murray [6] repeats Mannerheim's data in his monograph, adding nothing but drawings of the body contour, which however have not much value. Horn [3] gives his own observations, among others, the data on the sexual dimorphism of *C. luridipennis*. Having examined the specimen regarded as the type, he synonymizes *C. brunneipennis* with *C. basilaris* Say. The same view is held by Hatch [1, 2], according to whom "a male in the LeConte collection labelled "*brunneipennis* Mannh, Kenai, Type" and probably received by him as typical from Mannerheim is *basilaris* Say". Moreover, Hatch synonymizes *C. luridipennis* with *C. simplex* Say. In his monograph Jeannel [4] also treats the name *C. luridipennis* as a synonym of *C. simplex*, whereas *C. brunneipennis* is here considered to be a separate species. Jeannel gives a drawing of the aedeagus of this last species and describes the subspecies *C. brunneipennis asiaticus* Jeann. from eastern Siberia and Tibet.

The definitive determination of the taxonomic status of *C. brunneipennis* and *C. luridipennis* and relationships between these species, *C. simplex* and *C. basilaris* can be

attained merely by comparing the types of these species. Since the interpretation of *C. basilaris* and *C. simplex* raises no questions, I have confined my examination to the other two species. The results are as follows:

The type of *C. luridipennis* (Figs. 1—4) is a male and it corresponds entirely to *C. brunneipennis* Mann. in Jeannel's interpretation [4]. The aedeagal tip is very characteristic; it is strongly thickened, in the form of a transverse cylinder, and devoid of the median tubercle. Thus, this specimen is to a certainty not conspecific with *C. simplex* whose penis has not a cylinder on the apex but a conspicuous tubercle in the middle of the apical margin. Both these species have the elytra with a bluish pruinose reflection and the male profemora bear a tubercle on the internal side.



Figs. 1—6 *Catops luridipennis* Mann.

1 — aedeagal tip, dorsal view, 2 — aedeagal ligulae, ventral view, 3 — aedeagal tip, lateral view, 4 — anterior tibia, 5 and 6 — fifth abdominal sternite; (1—4: Kenai, Alaska, type ♂ of *C. luridipennis*, 5: Kenai, Alaska, lectotype ♀ of *C. brunneipennis*; 6: ♀ from Hirogawara, Japan)

The type of *C. brunneipennis asiaticus* is also a male and its penis is almost identical with that of *C. luridipennis*. Similarly, in the series of specimens from Japan examined by me the penis shows no differences in shape in comparison with that of *C. luridipennis*.

As far as I know, there are two specimens that may be recognized as syntypes of *C. brunneipennis* Mann. One of them is a female preserved in the C. G. Mannerheim collection in the Zoological Museum in Helsinki, where it has been labelled as the holotype. The other one is a male stored in the LeConte collection in the Museum of Comparative Zoology at Cambridge, Mass. This specimen is conspecific with *C. basilaris* which unjustly warranted Horn and Hatch to synonymize these two species. In fact, the object of Mannerheim's description was a female, as evidenced

by his mention of its elytra "apice subacuminatis". This mention refers to a small denticle which is often present in many *Catops* and *Sciodrepoides* species and is an extension of the elytral suture. This character is sometimes rather largely variable but it occurs only in females. In accordance with the diagnosis, it can be observed also in the type specimen from the Museum in Helsinki, but the specimen in the LeConte collection, being a male, has undoubtedly its elytra rounded, and therefore it is not consistent with the diagnosis. Since Mannerheim described *C. brunneipennis* on the basis of a series of insects without pointing at the holotype, I propose to designate the female specimen in the Museum of Helsinki as the lectotype, because it 1) is preserved in the Mannerheim collection and 2) agrees with the original diagnosis.

The question arises whether *C. brunneipennis* sensu Mannerheim is the same species as *C. brunneipennis* sensu Jeannel and, consequently, whether it is conspecific with *C. luridipennis*. The problem is difficult to decide, because it demands that a male type shall be compared with a female type, which is always a hazardous undertaking. Nevertheless, everything indicates that these two names refer to one and the same species. The essential non-sexual characters are similar and the slight differences may be due to individual variation or allometry, e.g. the puncturation of the head, markedly finer in the *brunneipennis* type than in the *luridipennis* one. A characteristic feature of the female lectotype of *C. brunneipennis* is a very deep semicircular notch in the higher edge of the fifth abdominal sternite (Fig. 5); sternites 4 and 5 have, in addition shallow depressions. *C. luridipennis* is the only American species with the pruinose reflection on the elytra that has this character. To be sure, I did not manage to examine females from America, but this character can be seen in all the females of the above-mentioned series from Japan, which no doubt belong to *C. luridipennis*, as can be ascertained on the basis of males. The females from Japan have the edges of notches more or less protruding (Fig. 6), which may be a manifestation of geographical variation, but the question needs further investigation. As regards other species with the bluish pruinose reflection on the elytra, females of *C. simplex* Say and *C. americanus* Hatch have their sternites more or less impressed but without a distinct semicircular notch and in the females of *C. gratiosus* (Blanch.) and *C. alsiosus* (Horn) the sternites are unmodified.

The above-mentioned facts persuade me to acknowledge *C. brunneipennis* and *C. luridipennis* to be one and the same species, distinct from both *C. basilaris* and *C. simplex*. As the two names were published simultaneously, I propose the name *Catops luridipennis* Mann. for the taxon discussed, because its type, as a male, is a better bearer of the characters of species.

The problem of the status of the Asiatic race, which now has to be denominated *C. luridipennis asiaticus* Jeann., remains open. In order to settle this, it is necessary to examine more material from Central and East Asia and North America. At any rate, it certainly is not a separate species. Not only the aedeagus but also the male anterior tibiae (according to Jeannel, the character of the subspecies) are analogous to those in the nominal form, at least it is so in my series from Japan. The proportions of the antennal joints show some variation, but it is rather individual in nature.

## Material examined

- 1) Type ♂ of *C. luridipennis* Mann. labelled as follows: "165" "*C. luridipennis*, Kenai, Mannh." ("Type 7378") *C. luridipennis* (Mann)". coll. Museum of Comparative Zoology, Cambridge, Mass.
- 2) Syntype ♀ of *C. brunneipennis* Mann. labelled as follows: "Frankenhaeuser" / "Kenai part. inter." / "Coll. Mannerh." / "*Catops brunneipennis* Mannerh." / "Mus. Zool. H: fors, Spec. typ., No 2479, *Catops brunneipennis* Mannerh., holotype" / "Mus. Hels. N:o 2465", coll. Zoological Museum of the University, Helsinki, This specimen is hereby designated as lectotype of *Catops brunneipennis*, Mannerheim, 1853.
- 3) Holotype ♂ of *C. brunneipennis asiaticus* Jeann., from Tunkun Sajan, Siberia, coll. Musée d'Histoire Naturelle, Paris.
- 4) *C. luridipennis* Mann., a male from British Columbia, coll. Musée d'Histoire Naturelle, Paris.
- 5) 10 specimens ♂♀ of *C. luridipennis* Mann. from Japan: "Nakabusa Nagano, Japan, Aug. 21, 1961, Y. Shibata leg.", 1♂, and "Hirogawara, Yamanashi Pref., Aug. 26, 1969, Y. Shibata leg.", 9 specimens. Coll. Institute of Systematic and Experimental Zoology, Kraków. The species is new for Japan.

I wish to express my heartfelt thanks to Mrs. A. Bons for allowing me access to the collection of the Musée d'Histoire Naturelle in Paris, to Mr. H. Silfverberg (Zoological Museum in Helsinki) for the loan of material and, above all, to Dr S. B. Peck of Carleton University of Ottawa for his readiness to help and his kind assistance.

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В. Шимчаковский, Таксономический статус *Catops luridipennis* Mann. и *Catops brunneipennis* Mann. (Coleoptera Catopidae)

Содержание. В настоящей работе автор рассматривает вопрос систематического статуса описанных из Аляски видов *Catops luridipennis* Mann. и *C. brunneipennis* Mann., а также их отношения к другим северо-американским видам. *C. luridipennis* признано отдельным видом, а *C. brunneipennis* Mann. его синонимом.