

A REPORT ON THE NOMENCLATURE OF SOME NEOTROPICAL NOTONECTA WITH THE DESCRIPTION OF SOME NEW SPECIES.

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of Kansas.

An examination of the types and historical materials in various European Museums makes necessary certain changes in the nomenclature of some of the American Notonecta. The confusion of species in the past has led to errors in synonymy and to a misconception of the faunal distribution of certain species. Thus in Kirkaldy and Torre-Bueno's Catalogue of American Aquatic and Semi-aquatic Hemiptera (1909) we find the distribution of *Notonecta undulata* Say which is a North American species given as "All over Canada and the United States; Mexico; Cuba; Jamaica; Columbia; Peru; Chile." The above was based, doubtless, on the conception of the species by the senior author who had monographed the Notonecta of the world (1897). In the above named catalogue we find the following statement of synonymy:

Notonecta undulata Say 1832.

= *americana* Gmelin 1789.

= *scutellaris* Fieb. (in part) 1852.

= *punctata* Fieb. (in part) 1852.

= *variabilis* Fieb. (in part) 1852.

= *pallipes* Fieb. 1852.

= *maculata* Fieb. 1852.

= *unicolor* Fieb. 1852.

= *virescens* Blanchard 1852.

= *pallipes* Lethierry 1881.

Mr. Kirkaldy's conception of this species was just as confused as his treatment of *Notonecta glauca* Linn. has been shown to be by Delcourt and others or his inexplicable inclusion of his *Notonecta kiangsis* as a variety of *Notonecta chinensis* Fallou! The assumption that Kirkaldy had a reasonable understanding of specific identity led to the description of this *Notonecta kiangsis* Kirkaldy erroneously as new by both Professor Esaki and me. We described it almost simultaneously under the names *Notonecta bergrothi* Esaki and *Notonecta suensoni* Hungerford from specimens from China which had come into our hands. Both of

us have since seen the specimens in the Paris Museum bearing the locality labels as published by Kirkaldy and treated by him as a variety of *Notonecta chinensis* and recognized the synonymy of our names. For my part, however, I was unable to explain how any one of Kirkaldy's experience could have done it until I saw the type of *Notonecta virescens* Blanchard and recalled that Kirkaldy considered it under *Notonecta undulata* Say. *Notonecta virescens* Blanchard is a small species described from Chile, South America, and belongs to that group of small South American *Notonecta* in which I have described several species. There is a larger species in Chile, of which I have several hundred specimens, that in Kirkaldy's day, might with some justification have been confused with *Notonecta undulata* Say merely because of its size. From the description and drawing of *Notonecta fazi* sp. n. given below it will be seen that it is specifically distinct from *Notonecta undulata* Say. I have not seen any South American specimen of Say's species. Neither have I seen it from the Antilles. It occurs throughout North America but is replaced more and more as one goes south¹ by a species with a broad black band across the hemelytra which has been known to us in recent years as *Notonecta howardii* Bueno. This is the species which comes to our collections in such numbers from the Islands of the Antilles. It is *Notonecta indica* Linnaeus. Sometimes one finds specimens with the scutellum margined with yellow—such, unfortunately, is the specimen in the Linnean collection in London. This had resulted in confusing this species with another which has a flavous margin on the scutellum and a similar black band across the hemelytra, the species to which we have been giving the name *Notonecta indica* and which is common in the Southwestern part of the United States and in Mexico. It is readily separated from the true *Notonecta indica* Linn. by the shape of the mesotrochanter which is angulate. (In *Notonecta indica* Linn. = *Notonecta howardii* Bueno the mesotrochanter is rounded). It is *Notonecta unifasciata* Guérin—the type of which I have seen in the Paris Museum. The three species of black and white *Notonecta* in the United States should therefore be known by the following names:

¹ I have it from North Carolina, S. Carolina, Tennessee, Florida, Georgia, Mississippi, Louisiana, Texas, Arizona, New Mexico, California, Mexico, Colombia in South America, Cuba, Jamaica, St. Thomas, St. Croix and Porto Rica.

Notonecta undulata Say widely distributed and varying from nearly white forms to some that are very dark.

Notonecta indica Linn. 1771.

= *Notonecta americana* Fabr. 1775.

= *Notonecta howardii* Bueno 1905 *et al.* including myself—Southern U. S., insular America, Mexico and Columbia.

Notonecta unifasciata Guérin.

= *Notonecta indica* of Kirkaldy *et al.* including myself—Southwestern U. S. and Mexico.

One sometimes finds pale forms of any of the above labeled *Notonecta variabilis* Fieb. This species does not occur in North America but until recent years *Notonecta raleighii* Bueno and *Notonecta lunata* Hungerford have gone by that name.

Doctor Kirkaldy in his first paper on the "Revision of the Notonectidae" 1897 treated *Notonecta bifasciata* Guérin as a valid species but in his "Ueber Notonectiden" 1904 unfortunately reported that *Notonecta bifasciata* Guérin and *Notonecta variabilis* Fieb. were only varieties of *Notonecta undulata* Say. Neither is related to Say's species.

An examination of the type of *Notonecta bifasciata* Guérin shows it to be a different species from the one I figured in *Psyche* Vol. XXXIII, Plate 2, Figure 5, 1926, which is probably *Notonecta sellata* Fieb. In the above named paper I figured two species which I then supposed had been described that I now know to be new.

***Notonecta confusa* sp. n.**

(See *Psyche* Vol. XXXIII, Plate 2, Figure 6).

Size: Length 12. mm.; width of head 2.8 mm.; greatest width of thorax 4 mm.

Color: The color of this solitary specimen is pale yellow throughout. It may be the leucochromatic form of a dark species or merely teneral of a form colored as in *N. undulata* Say.

Structural characteristics: Size and general appearance might confuse this species with any of the *Notonecta undulata* Say group. Vertex: synthlipsis:: 2:1. The head and thorax shorter than in *N. indica* Linn. (*N. howardii* Bueno). The lateral margins of pronotum are straight. Trochanter hook on front leg of male about as in *N. undulata* Say. Mesotrochanter feebly angulate. Male genital clasper (as

shown in citation above) readily separates this species from *N. undulata* Say. Described from a single male specimen from "S. Amer." Type in the P. R. Uhler collection in U. S. National Museum, Washington, D. C.

***Notonecta distinctoidea* sp. n.**

(See Psyche Vol. XXXIII, Plate 2, Fig. 8).

Size: 10.8 to 12. mm. long; width of head 2.9 mm.; greatest width of thorax 4.35 mm.

Color: General facies dark. Head, anterior part of pronotum and legs pale yellow to horn. Face, legs and lateral margin of abdominal venter more or less marked with paris green. Scutellum black. Hemelytra purplish black save two oblique tan streaks near base of corium and clavus, and tip of membrane which is pale.

Structural characteristics: While the color description might apply to *Notonecta indicoidea* Hungerford this is a plumper species—both deeper in body and broader across the humeri, with a male genital clasper of quite different shape. Head not prominent. Vertex: synthlipsis: : 13:6. Pronotum strongly convex, rear margin and scutellum much higher than the head. Mesotrochanter rounded. Male genital capsule and clasper as shown in citation above.

Described from three specimens, all males from Mexico labeled as follows: 1st. specimen; "Mexique" "Museum Paris" coll. Noualhier 1898. 2nd. specimen, "Museum Paris, Mexique Etat de Jalisco, L. Diguët 1900." 3rd. specimen, "Mexique W. H. Ashm." "Corixa mexican N. S." "*Notonecta americana* Fab. var. det. Kkldy. '97." This also bears my labels "H. B. H. No. 226 Genitalia" and "Europ. trip 1928 H. B. Hungerford."

This third specimen is stained and misshapen and I therefore make the first named specimen the type and Paris Museum its depository.

Comparative notes: In comparing this species with *Notonecta indicoidea* it may be noted that the species is plumper of body, more like my *Notonecta distincta*, from which it differs in shape of head and in lacking the basal protuberance of the anterior trochanter of the male.

***Notonecta fazi* sp. n.**

Size: Length 12 mm.; width of head 3.3 mm.; greatest width of thorax 4 mm. Males a little smaller.

Color: General facies dark. Head, anterior part of pronotum and legs pale yellow. Scutellum black. Hemelytra, reddish brown to black marked with tan. Membrane dark sometimes with a pale spot in distal half, sometimes with the tips pale instead. The tan markings are variable, typically as follows—on base of clavus and extending as indefinite streak near the outer margin to near its tip. A small area near base of corium sometimes lacking—another of various form in outer half of corium sometimes but not usually reaching membrane.

Structural characteristics: The short truncate head and the shape of the male genital claspers distinguish this species structurally from others of the same size. Anterior and mesotrochanters as in *N. undulata*. The male genital clasper shaped like a boot with the heel to the rear. Capsule rather elongate.

Described from several hundred specimens from Chile, South America, and were most kindly presented to me by Doctor Alfredo Faz, in whose honor I name the species. Some are labeled "Limache," some "Santiago" and others "Termas Cauquenes." The holotypes, allotype and paratypes are in the University of Kansas Collection. Some paratypes will be sent to U. S. National Museum and to Mr. J. R. de la Torre-Bueno. I was quite surprised to find so few examples of this species in the European Museums.

In the Deutsches Entomologische Museum, Berlin-Dahlem:

1 ♀ "Peru" "Coll. Breddin."

1 ♂ "Valdevia, Chamelcha." "Coll. Breddin." This was det.

N. undulata Say by Kirkaldy 1899.

In the Paris Museum:

1 ♂ "Museum Paris Chili Valparaiso R. Martin 1922."

In the Berlin Museum: 13 spec. "Fundort."

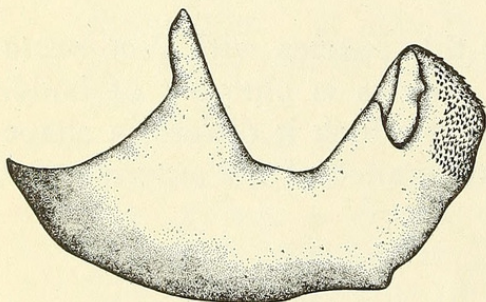


Fig. 1

N. fazi sp. new.

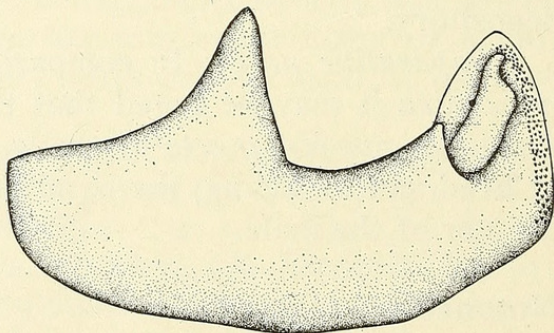


Fig. 2

N. verveertbruggheni Hungerford.

Genital capsules of males.

Fortunately it has been possible to recognize the specimens that Doctor Kirkaldy studied and even where his conception of a species had been very vague it will be possible to reassign his insects to their proper species, thus correcting misconceptions of distribution and relationships. This work has been accomplished and will be reported in my review of the genus *Notonecta*.

DR. WILLIAM BARNES.

BY GEORGE P. ENGELHARDT, Brooklyn, N. Y.

The death of Dr. William Barnes, of Decatur, Ill., on May 1st, at the age of seventy, was announced at the meeting of the Brooklyn Entomological Society on May 15 and received with deepfelt regret. A life member of long standing, Dr. Barnes often timed his visits to the east so as to connect with the entomological sessions in Brooklyn, where he was assured of a hearty welcome by his many friends and the members one and all. His presence always gave rise to intense enthusiastic discussions, mainly on the North American Lepidoptera, a subject on which he was an internationally recognized authority.

Only those who have been privileged to visit Dr. Barnes at Decatur, Ill., can have an adequate idea of the size, composition and scientific importance of his collection. Housed in a separate building of fire-proof construction, the main collection is placed in oak cabinets of some 1200 drawers, while reserve and exchange material is contained in 2000 or more so-called "Schmidt" boxes arranged on shelves on the wall. Type specimens, including Holotypes, Paratypes, Homotypes, etc., are represented to the number of nearly 7000. Five hundred thousand would seem a conservative estimate as to the total number of specimens in the Barnes collection. To assemble such a collection has been the work of a life time of indefatigable labor and unstinted expense. Himself an enthusiastic worker in the field, Dr. Barnes also supported most liberally experienced collectors and dealers in Lepidoptera in all parts of the country and usually on terms which gave him the first choice on the seasons captures or receipts. Nearly every species in the Barnes collection has been finally determined by comparison with the original type wherever located,



Hungerford, Herbert B. 1930. "A report on the nomenclature of some neotropical Notonecta with the description of some new species." *Bulletin of the Brooklyn Entomological Society* 25, 138–143.

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