FEBRUARY,

VOLUME IX. 1909. NUMBER 4.

The Ohio Naturalist

A Journal Devoted more
Especially to *the* Natural
History *of* Ohio.

OFFICIAL ORGAN *of* THE BIOLOGICAL CLUB
of the OHIO STATE UNIVERSITY, *and of* THE
OHIO STATE ACADEMY *of* SCIENCE.

Ohio State University, Columbus.

Annual Subscription Price, $1.00.
Single Number 15 cents.

Entered at the Post-Office at Columbus, Ohio, as Second-class Matter.

first described as a species by Lloyd and Underwood, and ranging from Newfd. and Quebec to Wisconsin and southward to Alabama and the Carolinas. The specimens we have examined clearly point to a subordinate relationship to **Lycopodium lucidulum** Michx. rather than to a distinct specific identity. The leaves are very minutely denticulate to entire instead of toothed as in the species and are generally lance-linear and narrowed from the base upwards instead of being broader above the middle as in true **L. lucidulum.** The plant is being critically studied by Prof. L. S. Hopkins from whom we may expect a more detailed report.

Carnegie Museum, Pittsburg.

A SYNONYMICAL DEFINITION OF NYSSON AND OF N. AURINOTUS.

W. H. Patton.

Acanthostethus, described by Frederick Smith in the Transactions of the Entomological Scoiety of London for 1869, p. 306, was founded on a female specimen of an Australian species, A. basalis Sm. (l c. and pl. vi, f. 3), and is probably identical with the "Spalagia" which is mentioned by Shuckard in Lardner's Encyclopedia, but without a word of description, as an ally of Nysson. Although Mr. Smith does not appear to have appreciated the fact, this insect differs from true Nysson in nothing but the union of the first and second submarginal cells of the forewing, by the obsolescence of the dividing vein; and in this it agrees with the other Australian species, N. mysticus Gerst., and with the New Mexican Nysson solani Ckll. (Miscothyris Sm., 1860, is a related Australian genus). The Hyponysson of Mr. Cresson presents a precisely similar peculiarity in that, as he has pointed out, it differs from Nysson in nothing but the union of the third and fourth submarginal cells.

In his monograph* Gerstaecker has shown that Synneurus Costa and Brachystegus Costa, are but synonyms of Nysson, the characters of the presence or absence of a petiole to the third submarginal cell of the forewings and the length of the submedial cell of the hind wings being variable in different individuals of the same species and not being in correlation with any other characters.

Turning now to another group of wasps we find that Miscus and Ammophila are known to be one genus just as Synneurus and Nysson are, and that Coloptera and Ammophila, which I have material for proving to be generically inseparable, have

* Die Arten der Gattung Nysson, Halle, 1867.

differential characters parallel with those separating Acanthostethus and Hyponysson from Nysson proper. It is evident, therefore, that the latter are not independent genera. Further, being based each on a single species (and mostly on a single individual) and defined by a single character known to be individually, and not specifically, variable and which if employed would place a single species in several genera at once, the terms Synneurus, Brachystegus, Acanthostethus (Spalagia) and Hyponysson must be treated as names of artificial groups and cannot be used for the indication of sections or subgenera in the genus Nysson but must be placed as direct synonyms of the genus.

The case of Paranysson is not similar. The character upon which it is founded, the serrate tibiae, may be different in degree in different species and may not in all cases be in correlation with other characters, such as the bilobed postscutellum and the short submedial cell of the hind wings and may therefor fail of full generic value; but, the character being specific, the name Paranysson cannot be quoted as a direct synonym of Nysson, and may be used subgenerically. While it may remain a matter of opinion whether Paranysson should be regarded as a genus and while the consideration of American species alone supports the view that it is a distinct genus (the species with serrate tibiae from both South and North America agreeing in the bilobed postscutellum and in the venation), yet the connection with Nysson, through the European scalaris and militaris, as pointed out by Gerstaecker, is, it seems to me, sufficient to sustain the broader view. Study of the connecting species may discover a generic character in the male eighth ventral segment or in the claspers. The mandibles of Paranysson are much sinuate beneath, of Nysson without sinuation; both not dentate.

If there exists any difference between a genus and a subgenus other than one of degree, this difference is surely that of the nomenclature employed, the name of the genus appearing in the binomial designation of the species and that of the subgenus not so appearing, and no "hedging" is possible in a binomial nomenclature. It is therefore to be regretted that in Mr. Cresson's paper on the "genus Nysson" (Transactions of the American Entomological Society, vol. ix, p. 273, March, 1882), in which he indicates "subgenera," one of which is Paranysson, the inconsistency should appear, on the same page, of adopting Paranysson into the nomenclature of the species with serrate tibiae to the exclusion from that nomenclature of the generic name Nysson; for, notwithstanding Mr. Cresson's use of the words quoted above, he has thus adopted Paranysson as a genus and must be so cited. Foxia (F. pacifica Ashm., Calif.) differs from Nysson in having second recurrent in third submarginal cell, and in ventral segments, 4–5 each having a lateral tooth, ♀ pygidium serrate at tip.

Paranysson texanus Cress.

The following characters pertaining to this species are worthy of note. The second submarginal cell is distinctly five-sided, the submarginal vein being much drawn down to meet the recurrents, the first recurrent being inserted near the base of the cell and the second scarcely beyond the middle; the third submarginal cell has a short side on the marginal. The eleventh and twelfth joints of the male antennae are slightly excavated beneath at base, but the apical joint is not at all excavated. The retracted eighth ventral segment of the male is of a peculiar form and has a deep median slit. (In N. plagiatus and N. aequalis this segment is sinuate-emarginate and the corners are rounded and not of peculiar form.) The tubercles, posterior angles of mesonotum and the sides of the abdominal segments are sometimes ferruginous. I have specimens from Florida (W. H. Ashmead) and Missouri. Specimens of P. fuscipes Cress. from Poway, Calif., (F. E. Blaisdell) indicate that that is but a variety of texanus, as the legs vary from entirely black to mostly red. The specimens from the Atlantic and Pacific slopes agree in all their structural characters, including the form of the seventh and eighth ventral segments and the claspers of the male, and differ only in the more extensive yellow markings on the abdomen of the western variety, a character in agreement with the established rule of geographical colorational variation. Some of the Californian males have a yellow mark on the sides of the seventh abdominal segment. (N. plagiatus from Lake Co., Calif., (O. T. Baron), likewise has more extended yellow marking than the typical variety from Connecticut.) In Mr. Cresson's synopsis of the species of Paranysson and Nysson the systematic value of the coloration of the legs has been greatly exaggerated.

No valid specific characters have yet been pointed out for separating P. mexicanus Cress from texanus.

Paranysson armatus Cress.

I have a male of what appears to be this species from East Tennessee (E. M. Aaron). It differs from Mr. Cresson's description only in having no yellowish spots on the third and fourth segments of the abdomen and in having a small median tubercle near the edge of the clypeus and an angle or short median tooth between the two larger teeth on the seventh abdominal segment, these latter characters not being mentioned in the description of armatus. It agrees with texanus in venation, in the form of the antennae, in having a small tooth on mesopleura and in the presence of a longitudinal ridge on the face and of a longitudinal tubercle on the inner side of each posterior ocellus, and the 7th and 8th ventral segments also agree; its sculpture also and coloration afford no clear characters for distinguishing it from texanus,

but the form of the seventh dorsal segment is sufficient to separate it, armatus having only two distinct teeth on this segment and texanus having four.

Say's description of Nysson aurinotus applies equally well to armatus and to texanus, with the exception of size ("three-tenth of an inch") in which it agrees precisely with armatus, and not a word of his description is at variance with either. But as Say did not mention the armature of the abdomen and probably knew only the female it is hardly safe to adopt his name for one of them to the exclusion of the other. As it is possible that specimens may be found showing connection between the two forms of the seventh segment, it is not impossible that Say's name may yet find recognition, but no such connection is now known. The name given by Say, meaning "gold-known," indicates a very essential and "prominent" character of texanus, and the absence of yellow marks on prothorax and scutellum is characteristic of American Paranyssons and shows clearly that Say's species has no relationship with æqualis. The female specimens from Illinois described by Mr. Cresson under aurinotus belong to N. æqualis Patton. The males of æqualis and N. plagiatus do not differ from one another in form of eighth ventral segment and claspers.

Agenioxenus. To Mr. W. J. Fox is due the credit of referring rufiventris to synonomy with robinsoni Cress. (cf. Tr. A. E. S., 1892, p. 57.) The species is easily distinguished from all others by the male antennæ being longer than both head and thorax. Cresson's figure shows hind cubitus interstitial.

The specimen in the Riley collection should be re-examined, and Walsh's figure compared. The form of prothorax and of metathorax may have been modified in mounting. In Taschenberg's C. abnormis, ♂ from Rio, the venation is as described for Agenioxenus.