

AN ASIATIC SPECIES OF THE DECTICID GENUS ATLANTICUS
(ORTHOPTERA; TETTIGONIIDAE)

BY JAMES A. G. REHN AND MORGAN HEBARD

Recently, while looking over a collection of insects from China, acquired by the American Museum of Natural History, we were greatly surprised to see a female of what was presumably a species of the genus *Atlanticus*. This genus was previously known only from the eastern and central United States and a small adjacent portion of Canada, and on account of a recent study we had made of the species¹ our acquaintance was of more than a superficial character. Through the kindness of Dr. Frank E. Lutz the specimen was placed in our hands for more detailed study, and a critical comparison has been made to determine its true relationship and generic position. The allied Old World genera were examined, when available, or the diagnoses studied, and the result of our investigation confirms our first impression, as the species is a true *Atlanticus*, the first known from the Old World, or for that matter from outside of the area mentioned above.

The species has certain features of distinction which give it a unique position in the genus, such as the great elongation of the distal joint of both pairs of palpi, and the tegmina, in the female sex, extending briefly caudad of the caudal margin of the pronotum. Whether these features are specializations, or whether they are phylogenetic "signboards" indicating the possible ancestral affinities of the genus, we are not prepared to say at present. We now are warranted, however, in pointing to this genus as another member of the already long list of genera common to the biota of eastern China, Japan, and to a certain extent of Formosa, and that of the eastern United States.

In a synoptical arrangement of the genus we would place the species by itself, with the feature of great palpal length as diagnostic. The discovery of the male sex will be awaited with interest.

¹ Trans. Amer. Entom. Soc., xlii, pp. 33 to 99, (1916)

Atlanticus palpalis new species

The species has a unique position in the genus, being distinguishable from all the previously known forms by the much more elongate distal palpal joints, the evident tegmina in the female sex, which project appreciably caudad of the pronotum, and the very regular paginal pattern of the ventral portion of the external face of the caudal femora. Otherwise the new form has most resemblance to *americanus*, *testaceus*, *pachymerus*, *monticola* and *davisi*, more particularly to *pachymerus*. The affinity with *americanus* is evidenced in the general form and proportions, particularly of the fastigium, pronotum and limbs, but the form of the ovipositor and of the subgenital plate are additional features of difference. The relationship with *testaceus* is largely apparent in the ovipositor form, and in a general way that of the subgenital plate, but additional differences are evident in the much more elongate limbs and deeper head, as well as the narrower fastigium. With *davisi*, *pachymerus* and *monticola* we find the closest general affinity, the form of the ovipositor, of the subgenital plate and of the whole insect, except the proportions of the limbs, being much more nearly as in those species. The size is, however, far larger than in any of these and the general characters of difference given above are quite sufficient to enable one readily to recognize the species.

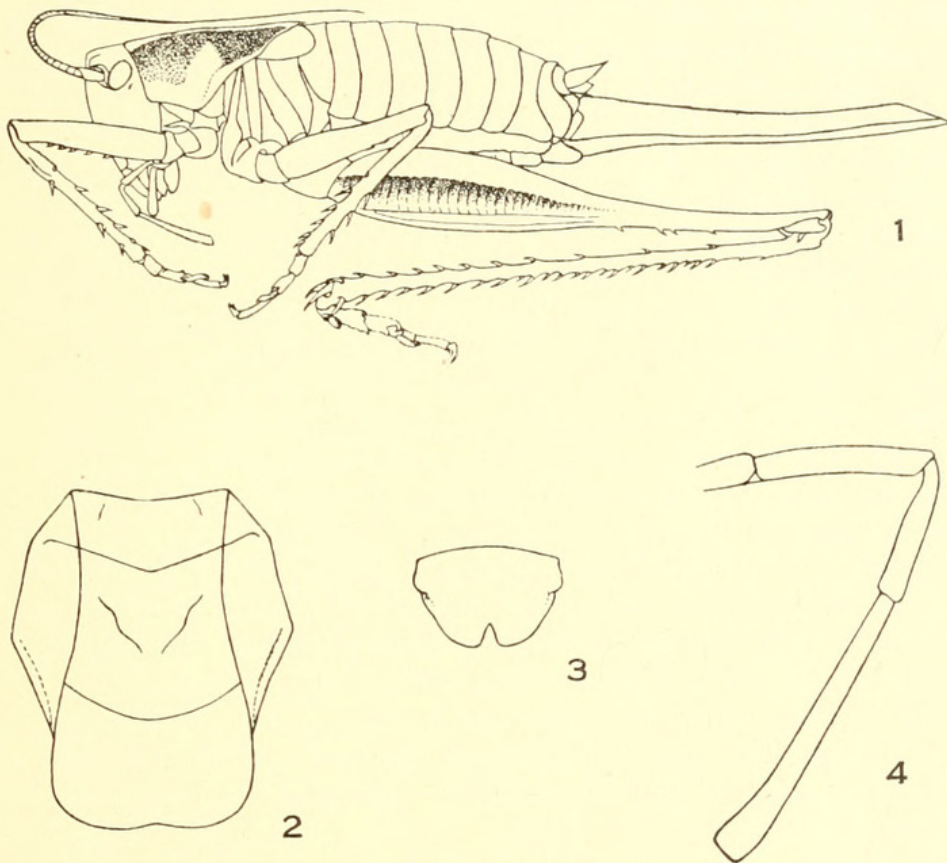
Type.—♀; Yen-ping, Province of Fukien, China. July 12, 1917. [American Museum of Natural History.]

Size large: form elongate fusiform, as usual in the genus, micropterous: surface smooth, moderately polished on face, genae and lateral lobes of pronotum, less so on limbs and ovipositor.

Head well seated in the pronotum, in profile the fastigio-facial angle is rounded rectangulate: fastigium of vertex of medium width, very finely sulcate dorsad, ventrad with margins concavely converging to truncate apex, which is in contact with the fastigium of the face: facial line weakly retreating, face slightly deplanate; width of head across ventral portion of genae greater than width across eyes. Palpi slender, elongate: maxillary palpi with third joint nearly as long as the two proximal joints of cephalic tarsi; fourth joint of same three-fourths as long as third joint, weakly infundibuliform, sharply narrowed proximad; distal joint of same twice as long as third joint, straight except very briefly distad, faintly enlarging distad in proximal two-thirds, distal extremity thickened and subclavate, with a weak flexor bend, the distal margin with a weak oblique truncation; labial palpi with distal joint enlarged similarly to but less decidedly than the distal maxillary palpal

joint. Eyes moderately prominent. Antennae somewhat longer than the body; proximal joint much enlarged, the internal face with a distinct rectangular projection, when seen in dorso-ventral view.

Pronotum of the general type found in the genus, the dorsum well separated from the lateral lobes by very evident, though narrowly rounded, angles; disk of the pronotum in general flat, nearly one-half as long as the ovipositor and nearly equal to two-fifths of the length of the caudal femora; cephalic width of disk faintly more than two-thirds the greatest width of same, which



Atlantiscus palpalis new species. Figure 1. Lateral view of type. ($\times 1\frac{1}{3}$.) Figure 2. Dorsal outline of pronotum of type. ($\times 2\frac{1}{2}$.) Figure 3. Subgenital plate of type. (Greatly enlarged.) Figure 4. Maxillary palpus of type. (Greatly enlarged.)

is at caudal fifth; greatest constriction, which is at cephalic fourth, but slightly less than cephalic width; cephalic margin of disk moderately concave; caudal margin of same flattened arcuate, mesad with a very faint concave sinuation; lateral carinae of disk very weakly clepsydral; median carina of disk not evident cephalad, very faintly indicated caudad; metazona about one-half as long as the prozona; cephalic transverse carina at cephalic fifth, very obtuse-angulate. Lateral lobes of pronotum weakly expanding ventrad in transverse section; dorsal length of lobes contained nearly twice in their depth; cephalic margin of lobes weakly oblique truncate, ventro-cephalic angle

rounded obtuse, ventral margin oblique subtruncate, ventro-caudal angle broadly rounded rectangulate, forming the point of greatest depth, caudal margin strongly sinuate oblique, the humeral sinus evident: surface of lobes undulate, weakly impressed in the regions of the transverse sulci, the portion dorsad of the humeral sinuses impressed, vertical. Tegmina lateral, nearly contiguous mesad, largely hidden under the pronotum, normally visible distad of the caudo-lateral portion of the disk and caudal section of the lateral lobes as rather narrow rounded pads, projecting distad of the caudal margin of the disk hardly more than the width of the proximal antennal joint; distal extremity of tegmina faintly truncato-arcuate, the lateral margin regularly arcuate; surface of tegmina with raised anastomosing venation, in which the major veins are differentiable.

Abdomen with the faintest possible indication of a medio-longitudinal ridge and no carina on dorsal surface: disto-dorsal abdominal tergite with a pronounced and broad median depression, which is subvertical in position and sulcate mesad; distal margin of same segment arcuate between cercal bases, but with a marked and broad median emargination, which is obtuse-angulate cephalad and with parallel lateral margins caudad, the caudo-lateral angles sharply rectangulate. Supra-anal plate short, apex slightly more acute than a right angle, surface smooth except for a slight median transverse impression. Cerci about twice as long as exposed portion of supra-anal plate, incrassate in proximal two-thirds, there covered with setiferous papillae, distad sharply tapering to the aciculate apices. Ovipositor about three-fourths as long as the caudal femora, robust, deep, nearly straight, there being the faintest curve in the distal half; proximal fourth relatively inflated, this particularly evident from the dorsum;² dorsal and ventral margins gradually converging in proximal two-fifths of ovipositor, thence subparallel to the oblique truncation of the dorsal margin, which is found in the distal eighth; apex ventral, very acute; all margins entire. Subgenital plate broad, moderately transverse, the lateral angles sinuate convergent distad, the apex of the distal margin rather deeply V-emarginate, the angles bounding the same laterad subrectangulate.

Limbs elongate, particularly the caudal pair, rather robust. Cephalic femora but little shorter than the pronotal disk, ventro-cephalic margin with five spines on distal half: cephalic tibiae with foramina rimate, dorso-caudal margin of same with three to four spines, dorso-cephalic margin with no spines. Median femora slightly longer than the cephalic femora, with two to three spines mesad on the ventro-cephalic margin. Caudal femora subequal to the body (exclusive of ovipositor) in length, the proximal two-fifths greatly inflated, the greatest depth contained five and one-half times in the greatest length of the same; distal section of caudal femora slender, subequal, weakly enlarged in genicular region; pattern of the paginae ventrad of the

² The left dorsal valve is aborted in the type, being not more than a fourth the length of the right dorsal, but this condition has not distorted or exaggerated any of the characters here given.

median line regularly half "herring-bone," dorsad of the line rather irregularly scutellate proximad, passing to subshagreenous on distal section of inflated portion of the femora: ventro-external margin of caudal femora with three to four spines, ventro-internal margin of caudal femora with six to seven spines. Caudal tibiae with median distal spurs longer than the dorsal or ventral distal spurs, the internal median slightly longer than the external median. Caudal tarsi damaged.

General color between prout's brown and mummy brown, passing to sepia on the genae, pleura and paler portions of the lateral lobes, the caudal femora with a tawny-olive touch and the other femora with a faint dark olive wash. Head with the occiput paling to snuff brown; eyes mottled prout's brown and fuscous; antennae dresden brown proximad, passing to tawny, then distad to dresden brown again. Pronotum with the dark shining sections of the lateral lobes blackish fuscous; no whitish humeral line as usual in the genus. Tegmina mars brown. Ovipositor becoming more chestnut-brown distad. Femoral spines and areas at their bases blackish fuscous; spines of cephalic and median tibiae with areas at their bases infusate, the spines themselves tawny with darkened tips. Caudal femora with median line of paginae blackish fuscous, this shading away ventrad, but sharply contrasted with the tawny-olive wash of dorsal portion; caudal tibiae vermiculate with fuscous and washed with russet.

Length of body (exclusive of ovipositor), 37 mm.; length of pronotum, 12.3; least width of pronotal disk, 5; greatest width of pronotal disk, 6.8; length of exposed (lateral) portion of tegmen, 4.3; length of cephalic femur, 10.3; length of median femur, 11.6; length of caudal femur, 36; greatest depth of caudal femur, 6.1; length of ovipositor, 28.

The type of this striking and most interesting species is unique.



Rehn, James A. G. and Hebard, Morgan. 1920. "An Asiatic species of the Dectid Genus *Atlanticus* (Orthoptera: Tettigoniidae)." *Transactions of the American Entomological Society* 46, 219–223.

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