

On the Identity of *Gryllus scaber* Fabricius, 1798¹⁾ (Orthopt., Acrididae).

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Fabricius (1798, *Suppl. Ent. syst. Hafn.*: 196) described *Gryllus scaber* as follows: — “*Scaber*. 62-3. *Scaber fuscus* elytris abbreviatis. Habitat in India orientali Dom. Daldorff. An declaratus? Corpus paruum, fuscum, punctis eleuatis scabrum. Elytra corpore paulo breuiora.”

The species appears to have been almost completely overlooked since it was described. The description is very brief but, so far as it goes, is such as to limit considerably the number of modern genera to which the species could belong. Burmeister (1838, *Handb. Ent.* 2: 657) is the only subsequent author that has come to my notice who mentions *G. scaber* Fabr.; he suggested that it belonged to the genus *Ommexecha* Audinet-Serville, 1831 which, at that time, included *Chrotogonus* Audinet-Serville, 1839 as well as certain other more recently differentiated genera.

Present investigations on the latter genus necessitated an enquiry into Burmeister's suggestion and the type of *G. scaber* was sought. It would seem that it should be found in Fabricius' own collection but a diligent search by Dr. S. L. Tuxen, of the Zoological Museum in Copenhagen, failed to locate it in this collection (tempo-

¹⁾ *Gryllus scaber* Fabricius is not a valid name since it is an homonym of *Gryllus (Locusta) scaber* Gmelin, 1788, *Linné Syst. Nat.* (Ed. XIII) 1 (4): 2077, no. 152 (= *Gryllus tuberculatus* Fabricius, 1775, *Syst. Ent.*: 290, no. 16; 1781, *Spec. Ins. exhibit.* 1: 366, no. 25; 1787, *Mantis. Ins.* 1: 238, no. 30; Gmelin himself indicates this by reference to the two later works of Fabricius). Gmelin's species is now known as *Bryodema tuberculata* (Fabr.) (Oedipodinae).



Gryllus scaber Fabricius, 1798, Neotype. The right hind leg, which is missing from the neotype, has been added for the sake of symmetry. It was drawn from another specimen of *Chrotogonus oxypterus* (Blanch.).

rarily borrowed by this Museum from its home in Kiel) or in any other place. Neither was it to be found in Kiel (Dr. K. J. Bork, *in litt.*, 1951) nor in any of the other places where Fabricius' types may be found — London (Banks Collection), Oxford, Paris — although it was scarcely likely to be found in any of these. It must therefore be assumed that the type of *Gryllus scaber* Fabr. is lost.

Other than the original description and the suggestion of Burmeister, the only clue to the identity of *G. scaber* lay in a specimen previously loaned to me for study through the kindness of Dr. Tuxen. This specimen is considerably damaged and obviously very old, but, like many other old specimens from Copenhagen, it is on a comparatively modern pin; it bears a very old yellowed paper data label with the following in-

scription: "A: n: sp: ex Ind. or. B[or R]au**gaard" and below this, "cfr. Gryllus scaber".

Dr. Tuxen informs me that the top part of the label agrees completely with the labels in the collection of Sehested and Tønder Lund (the collection from which Fabricius described many of his species) but he is of the opinion that the lower part of the label was written a little later by another (unknown) hand — not, unfortunately, by Fabricius. Both inscriptions use the old long "s".

There is no question of the species being the type since, although neither Dr. Tuxen nor myself is able to decipher the collector's name, it is not that of Daldorff, a Dane who, incidentally, contributed to the collection of Sehested and Tønder Lund as well as to that of Fabricius himself. The abbreviation "cfr." also makes it quite clear that the specimen is not the type.

In the words "cfr. Gryllus scaber", however, is an important clue (since it is the only known specimen to bear this name) and it is quite likely that the person who wrote them actually compared the specimen with Fabricius' lost type. It is, of course, possible that the specimen was compared only with the description but this seems the less probable alternative.

With regard to the lost type itself, Fabricius presumed that this, like the specimen under discussion came from "India orientali". The expression "An declaratus?" is perplexing but doubtless refers to "Habitat", not "Dom. Daldorff", and implies that the collector declared that it came from "East India". What region is actually implied by "India orientali" is not clear but it has been my experience that really old material so labelled almost invariably originates in south-eastern India. North-eastern India nearly always seems to have been called "Bengal" and the Indo-Malayan region by more specific names such as "Malacca", "Java" etc. It is just

possible, however, that what we now understand by the "East Indies" is intended since Daldorff collected intensively in Sumatra. It is, however, much more likely that *Gryllus scaber* came from India, possibly Tranquebar which was then Danish (although it seems to have been the practice to specify this name)¹), if only because there does not appear to be any Indo-Malayan Acridid genus which would agree with Fabricius' description.

Assuming therefore that the type of *G. scaber* came from (south-)eastern India rather than from the East Indies, we can support Burmeister's surmise, since the only Indian (or for that matter, East Asiatic) genus containing a species which agrees with Fabricius' description is *Chrotogonus*. Furthermore, in spite of the appalling confusion in the systematics of that genus, there are only two described Indian species to which it might belong. Since these are synonymous (see below) we are reduced to considering a single valid species, namely *Chrotogonus oxypterus* (Blanchard, 1836). To this species belongs also the specimen under consideration as having possibly been compared with the type of *G. scaber*. A prolonged study of *Chrotogonus* also has led to the discovery of no other possible Indian species that it could be. The same species occurs also in Ceylon but the entire genus is absent from the Indo-Malayan region.

It can, in my opinion, therefore be safely assumed that *Gryllus scaber* Fabricius, 1798 (*Suppl. Ent. syst. Hafn.*: 196)²) = *Ommexecha oxypterus* Blanchard, 1836 (*Ann. Soc. ent. Fr.* 5: 622, pl. 22, fig. 9.) syn. nov. = *Chrotogonus oxypterus* (Blanchard, 1836).

¹) There are several old specimens labelled "Tranquebar" in the Copenhagen Museum which are conspecific with the specimen under discussion.

²) *Gryllus scaber* Thunberg, 1824, *Mém. Acad. Imp. Sci. St. Pétersbourg*, 9: 393, 400, falls as an homonym and must be replaced as the type species of *Elaeochlora* Stål, 1873, by the earliest available

Further synonymy will be discussed more fully elsewhere, but it may be stated here that, after prolonged investigations involving the comparison of type and metatypical material, the following also have proved to be synonyms of *Ch. oxypterus*:

Chrotogonus Saussurei I. Bolivar, 1884, *An. Soc. esp. Hist. nat.* **13**: 39, 47, syn. nov.

Chrotogonus brachypterus I. Bolivar, 1902, *Ann. Soc. ent. Fr.* **70**: 605, syn. nov. (A variation with greatly reduced tegmina and wings).

Chrotogonus fuscescens Kirby, 1914, *Faun. Brit. Ind. Acrid.*: 163, syn. nov. (Fully alate form of a normally hemipterous species).

So that there may be no doubt in future, I propose, at the suggestion of Dr. Tuxen (for whose help I am most grateful and whom I wish to thank), that the specimen under discussion above be regarded as the *neotype* of *Gryllus scaber* Fabr. Since the genus will be revised elsewhere, most of the variable characters which have proved to be of little or no taxonomic value are omitted from the following redescription of the species:

Gryllus scaber Fabricius, 1798.

Neotype: ♀, data as given above (p. 484). [Copenhagen].

A typical member of the genus *Chrotogonus* Audinet-Serville, 1839 and of the subgenus of the same name (see Kevan, 1952, *Mitt. schweiz. ent. Ges.* 25:95). Robust, strongly rugose and scabrous, less pronouncedly dorsoventrally depressed than in many species. Colour reddish-brown, mottled fuscous.

Head: Large; eyes globose, large and very prominent, their interspace about equal to the dorsal diameter of an

name, *Xiphocera auripennis* Walker, 1870, *Cat. Derm. Salt. Brit. Mus.* **3**: 522 = *Elaeochlora auripennis* (Walker, 1870), comb. nov.

eye. Frons rugose, slightly concave in profile, inclined at an angle of about 66 degrees from a line joining the fastigium verticis and the occiput; frontal ridge strongly compressed between the antennae, in profile ascending almost vertically from the level of the base of the antennae to the fastigium verticis, the union between this short vertical portion and the main slope of the frons being rather abruptly angled but not markedly step-like; lateral frontal carinae rather weakly arcuate. Fastigium verticis triangular, slightly concave, a little wider than long, set lower than the vertex between the eyes; lateral impressions rhomboidal, distinctly margined, about three times as long as wide and declining towards the frons. [Antennae lacking].

Thorax: Pronotal disc a little longer than wide, about equal in length to the width of the whole pronotum at the typical sulcus; meso- and metathorax not conspicuously wider than the prothorax. [Sternum badly damaged].

Legs: Hind femur robust, about three times as long as wide. Hind tibiae with spines of inner series shorter than those on the outer; outer spines seven, inner spines eight plus an apical spine; inner pair of apical spurs almost twice as long as the outer and approximately equal to the metatarsus; metatarsus a little shorter than the other two tarsal segments together. [Fore and middle legs lacking].

Wings: Tegmina scabrous, short, lanceolate, reaching a little beyond the middle of the hind femur and leaving about one-third of the abdomen exposed. Hind wings little more than half so long as the tegmina, dark fuscous.

Ovipositor: Rather slender for the genus; exposed part of upper valves slightly more than twice as long as their basal width, gradually and only moderately curved at their apices.

Measurements: Length 22, length of head 3.0, width across eyes 3.2, width across cheeks 3.8, greatest diameter of eye 1.95, length of pronotum 5.0, greatest width of pronotum 7.0, greatest width of thorax 7.5, height of pronotum 3.3, tegmen (left) 10.3 (right) 10.5 \times 3.5, hind femur 10.5 \times 3.4 mm.

Anmeldelse.

W. Forster & Th. A. Wohlfahrt: *Die Schmetterlinge Mitteleuropas*. 5 bind. Stuttgart. 1952 — ? Format 13 \times 25 cm.

Programmet for dette nu påbegyndte sommerfugleværk — det første større i Tyskland efter en pause på 40 år — er: I 1952—53 skal komme bd. 1 (samleteknik, anatomi, økologi, systematik m. m.) ca. 256 sider, og jævnsides hermed bd. 2 (dagsommerfuglene) ca. 128 sider + 27 farvetavler. Prisen for bd. 1—2 tilsammen er DM. 76.—, for abonnenter noget lavere. I 1954 bd. 3 (aftensværmere og spindere) ca. 260 sider + 30 farvetavler, 1956 bd. 4 (ugler) ca. 400 sider + 30 farvetavler, og endelig 1958 bd. 5 (målere) ca. 320 sider + 30 farvetavler. Priserne for bd. 3—5 er endnu ikke fastsat, men kan (muligvis) skønnes ud fra prisen for bd. 1—2.

Af det, som er kommet af bd. 2, kan ses, at bogens værdi vil bero på de af prof. Wohlfahrt selv udførte meget smukke akvareller, gengivet på tavlerne i 4-, resp. 5-farvetryk. Gøres det så fint som her, er denne reproduktionsmåde langt at foretrække for den såkaldte farvefotografering. Hver figur (ofte flere af hver art) forestiller et bestemt individ, ikke et "gennemsnitsdyr". Der anvendes ternær normenklatur og "nye" systematiske navne. — Bd. 1 derimod gør et trist, støvet indtryk. Billederne er stregklichér fra Berge-Rebel, enkelte måske ældre, alle kun af historisk interesse. Man leder ikke forgæves efter to kendinge fra barndommen (Fedderson : Samleren), den skrækkelige knækparasol og kloroformflasken med penslen i. Der anbefales middelalderlige dræbemethoder (injektionssprøjte, tryk med fingrene o. s. v.). Hele dette afsnit synes overflødig, men af salgstekniske grunde har man vel forlangt en "samleanvisning", og har så taget, hvad der lå på pulterkammeret.

Niels L. Wolff.