On the Genus Synthocus Schönh. (Col., Curcul.)

By Sir Guy A. K. Marshall.

It is now very nearly fifty years since I published a revision of the genus Synthocus (Tr. S. Afr. Phil. Soc. XVIII, 1907, p. 89) which then contained only 18 species. Since that time five additional species have been described, namely S. tuberculatipennis and maculipes Hesse (Ann. S. Afr. Mus. XXV, 1929, pp. 504, 505) from South Africa; S. viduus Hustache (Rev. Zool. Bot. Afr. XXX, 1937, p. 182) from the Belgian Congo; S. singularis Hustache (Bull. Soc. Neuchät. 62, 1938, p. 71) from Angola; and S. nigeriensis Mshl. (Ann. Mag. N. H. [11] XII, 1945, p. 439).

Another older species has also been added to the genus, because Dr. E. Haaf, who is now revising the vast genus *Brachycerus*, has made the interesting discovery that *B. bottegi* Gestro, from Somaliland, is not a *Brachycerus* but a true *Synthocus*. Thanks to information made available to me by Dr. Haaf I have been able to include the species in the accompanying key; but as the unique type is gummed on a card, it has been impossible to ascertain whether the median coxae are contiguous or otherwise. The species has therefore been included in both categories to facilitate identification.

I have to thank my old friend, Dr. A. J. Hesse of the South Africa Museum, for giving me an opportunity of examining the types of his two species.

Mr. P. Basilewsky, of the Musée Royal du Congo Belge, has also kindly submitted to me the unnamed species in that collection. They comprised six species, of which two are undescribed.

Key to the Species of Synthocus

- 1 (34) The median coxae separated, the intercoxal processes united between them.
- 2 (3) Prothorax with the anterior dorsal lobe very deeply emarginate and with a high carina on each side of it; elytra

subtriangular, rapidly widening from the base to the posterior declivity, with the sides straight
hopei Boh.
3 (2) Prothorax with the anterior dorsal lobe simply rounded
without carinae; elytra oval, oblong or quadrate.
4 (11) Interval 2 on the elytra raised from the base to the dec- livity; each elytron with three or more rows of tubercles
or costae.
5 (6) Prothorax more than twice as long as its basal width,
widest near the apex; hind femora far exceeding the apex
of the elytra
6 (5) Prothorax as long as or shorter than its basal width, widest
at or behind the middle; hind femora not exceeding the
elytra.
7 (8) Elytra with intervals 3 and 5 tuberculate or costate from
the base to the top of the declivity, and interval 2 without
tubercles on the upper half of the declivity
8 (7) Elytra with no tubercles or costae behind the middle on
intervals 3 and 5 and interval 2 with two or three small
tubercles on the upper part of the declivity.
9 (10) Elytra with interval 2 curving inwards at the base and
there clothed mostly with subrecumbent pale scales, inter-
val 5 with no tubercles behind the high basal costa; pro- thorax with the sides only gently rounded near the base.
10 (9) Elytra with interval 2 quite straight at the base and there
clothed with dense erect black scales, interval 5 with a
few small tubercles immediately behind the basal costa;
prothorax with the sides more strongly rounded at the
base (fig. 4) . <
11 (4) Interval 2 on the elytra not raised on the disk; elytra with
only two rows of tubercles or costae on each (except fla-
votuberosus which has three).
12 (13) Elytra convex, roundly declivous behind, each with three
rows of rounded yellow tubercles
13 (12) Elytra flat or depressed on the disk, the posterior decli- vity abruptly angulate.

14 (19) Interval 6 on the elytra with a conspicuous row of sharply conical tubercles along the dorso-lateral margin; tarsi short and broad, joint 4 of the hind pair less than twice as long as broad.

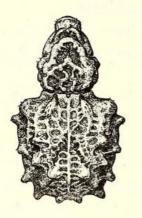


Fig. 1: S. bottegi (Gestro). costa at the base of interval 3 nearly parallel with the suture; pronotum with the apical third depressed below the level of the disk and its anterior margin not interrupted in the middle (fig. 1) bottegi Gestro
16 (15) Elytra with the sutural area deeply depressed, the costa at the base of interval 3 very oblique; pronotum with the apical third not depressed below the

15 (16) Elytra with the sutural area flat, the

disk, its apical margin shallowly interruped in the middle.

17 (18) Prothorax a little longer than broad (8:7), parallel-sided; elytra a little broader than long, the tubercles in the inner row as large as the outer ones

. reichei Boh.

18 (17) Prothorax as long as broad or slightly transverse, rounded laterally; elytra as long as broad, the tubercles in the inner row much smaller than the outer ones

. parvus Pér.

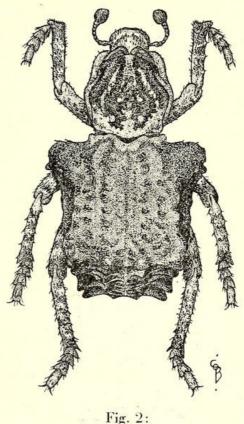
- 19 (14) Interval 6 on the elytra costate or with only rudimentary tubercles along the dorso-lateral margin; tarsi longer, joint 4 of the hind pair much more than twice as long as broad.
- 20 (21) Prothorax longer than broad, nearly parallel-sided, with the apical third on the same level as the disk; elytra with interval 4 curving strongly outwards behind and uniting with 6 at the top of the declivity (fig. 5)

. longicollis sp. n.

- 21 (20) Prothorax not longer than broad, rounded or angulate laterally, the apical third depressed much below the disk.
- 22 (31) Elytra with striae 1 and 2 irregular, interval 3 very oblique at the base and more or less obliterated behind.
- 23 (26) Interval 4 on the elytra curving strongly outwards behind the middle and uniting with 6 at the top of the declivity.

426

- 24 (25) Elytra with the humeral prominence very broad and formed of many agglomerated tubercles; interval 6 much reduced, the space between 4 and 6 almost vertical (fig. 2) . . . nigeriensis Mshl.
- 26 (23) Interval 4 on the elytra running nearly straight from the basal third to the declivity and there remote from 6.



S. nigeriensis Mshl.

27 (30) Elytra with a rounded tubercle at the top of the declivity on interval 2 and several smaller ones below it; the broad smooth costa along the sides of the anterior part of the pronotum absent or interrupted by the transverse subapical depression.

28 (29) Prothorax with a strong tubercular angulation at about
the middle; basal angles of the elytra not exceeding those
of the prothorax
· · · · · · · · · · · · · · · · truncatus Boh.
29 (28) Prothorax rounded laterally, widest behind the middle;
basal angles of the elytra exceeding those of the prothorax
· · · · · · · · · · · · · · · · · · dorsalis Fhs.
30 (27) Elytra with a transverse costa at the top of the declivity
but no rounded tubercle on interval 2, and no tubercles
on the disk of the declivity; prothorax with a complete
broad smooth lateral costa from the lateral angulation
to the apex (fig. 6) \ldots \ldots \ldots \ldots
· · · · · · · · · · · · · · · · · Iuluanus sp. n.

- 31 (22) Elytra with striae 1 and 2 quite regular, interval 3 very nearly parallel with the suture throughout its length.
- 32 (33) Elytra with interval 4 quite straight from the basal third to the declivity and there remote from 6; a feebly tuberculate ridge across the top of the declivity (fig. 7) . .

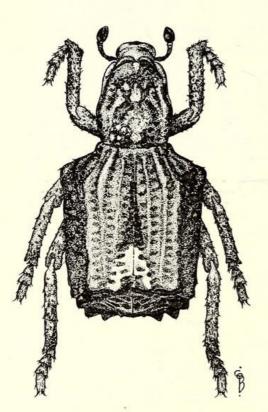


Fig. 3: *S. viduus* Hust.

33 (32) Elytra with interval 4 curving strongly outwards behind and joining 6 at top of the declivity, where there is a transverse row of four very large rounded tubercles (fig. 3)

. . . . regularis sp. n.

. . . viduus Hust.

- 34 (1) The median coxae contiguous or subcontiguous.
- 35 (58) Mesosternum with a median tubercle.
- 36 (45) Elytra with three or more rows of tubercles on each.
- 37 (38) Elytra with five rows of small separated conical tubercles of approximately the same size, without basal costae; the dorsal curvature very steep

at the base, the apical declivity regularly curved at the top without large tubercles (fig. 8)

- 38 (37) Elytra with three rows of large obtuse tubercles and with short tuberculate costae at the base of intervals 3 and 5; the dorsal curvature slight at the base and the apical declivity rather abrupt with large tubercles and a pale band across the top.

 - 40 (39) Pronotum with only a median sulcus or none; elytra with

the tubercles at the top of the declivity on intervals 2 and 4 separated, the suture without a pale patch.

41 (42) Elytra with the tubercles on interval 6 obtuse and packed close together; pronotum with the anterior third only slightly lower than the disk, the projecting tubercle on the lateral margin absent 42 (41) Elytra with the tubercles on interval 6 separated and conical; pronotum with the anterior third depressed much below the level of the disk, the lateral tubercle distinct. 43 (44) Prothorax transverse (8:11) the basal costa on interval 3 of the elytra high and broad and the space between it and the basal costa on 5 broad and quite smooth 44 (43) Prothorax only slightly broader than long (8:9); the basal costae on intervals 3 and 5 much smaller, formed of small coalescing tubercles, the space between them with one or two small tubercles . **tuberculatipennis** Hesse 45 (36) Elytra with only two rows of tubercles on each. 46 (47) Prothorax with a lateral carina from the apex to behind the middle; where it ends abruptly as a small vertical tubercle quadripennis Pér. 47 (46) Prothorax not carinate laterally. 48 (51) Elytra flat or slightly convex on the disk, declivons at the base. 49 (50) Elytra with the tubercles on interval 4 much reduced, smaller than those on 6 and sloping towards the suture behind; interval 6 with 7 tubercles on the lateral part (excluding the declivity); the basal margin of the elytra wider than that of the prothorax, the external angles acute and projecting forwards; legs with dark setae 50 (49) Elytra with the tubercles on interval 4 as large and as strongly conical as those on 6 and running parallel with the suture; interval 6 with only three much larger tubercles on its lateral portion; the basal margin truncate, not extending beyond the base of the prothorax; legs with sparse white setae (fig. 1) . bottegi Gestro

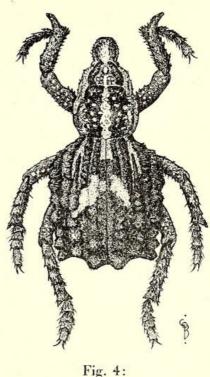
- 51 (48) Elytra concave on the disk, not declivons at the base.
- 52 (55) The mesosternal tubercle short, not nearly reaching the top of the median coxae; elytra with a laterally projecting tubercle in the humeral area; legs with conspicuous sparse whitish setae.
- 53 (54) Prothorax strongly angulate laterally, the apical third much depressed below the level of the disk; elytra with the humeral tubercle broadly triangular, the tubercles on interval 6 small and widely separated damarensis Mshl. 54 (53) Prothorax not angulate laterally, the apical third not depressed; elytra with the humeral tubercle narrowly conical, the tubercles on interval 6 large and close frater Mshl. 55 (52) The mesosternal tubercle longer, reaching to the top of the median coxae; elytra without a projecting humeral tubercle; legs with only black setae.

56 (57)	Prothorax transverse (3:4) strongly angulate laterally .
•	acuticollis Mshl.
57 (56)	Prothorax as long as broad, almost parallel-sided, with a
1996 - 1996 - 1996 - 1996 - 1996 - 1996 - 1996 - 1996 - 1996 - 1996 - 1996 - 1996 - 1996 - 1996 - 1996 - 1996 -	very small subdorsal tubercle on the lateral margin behind
	the middle
	maculipes Hesse
58(35)	Mesosternum without a tubercle; body very long and nar-
	row, nearly parallel-sided throughout
	wardeni Pér.

Synthocus angulifer, sp. n. (Fig. 4)

 \bigcirc . Derm black, with black and yellowish-grey scaling; head and rostrum black with a grey median line on the frons; prothorax black above with a grey median stripe, the pleurae wholly grey; elytra black above, with a small oblong pale patch (1 mm. long) at the base of the suture, a small grey spot at the base of stria 5, and a broad oblique grey band from before the middle of the suture to the middle of stria 4; the inflexed lateral margins entirely grey as far as stria 7 with two short upward projections, one behind the shoulders and another far behind the middle; the lateral grey area extending back so as to cover the apical half of the declivity, with a triangular extension upwards, the apex of which reaches a point on the suture at the top of the declivity; the underside grey, with the venter black, with a narrow median pale line on ventrites 1—4, and a broader marginal stripe on these segments.

Head rugosely punctate, with a slightly raised pale median ridge (interrupted in the middle). Rostrum with the carina of the epistome low and forming a flat curve that does not reach the lateral angles. Prothorax transverse (4:5), rounded laterally in the basal two-thirds, the anterior part formed by the large postocular lobes almost parallel-sided, the apical third of the dorsal area much narrower and a little lower



S. angulifer sp. n.

than the basal part and separated from it by a deep rugose transverse sulcus, the basal margin arcuate; the dorsum convex transversely and longitudinally, set with large deep separated foveae and with a broad shallow foveate median sulcus; the dorsal scales dense and recumbent, the pleurae with densely packed erect scales that partly conceal the deep punctures. Elytra very broadly ovate, nearly as broad as long, rounded laterally, widest before the middle, the posterior declivity vertical but longitudinally rounded at the top, the base very shallowly sinuate and not wider than the prothorax, without any fringe; the dorsum gently convex longitudinally, the striae regular, except that 4 and 5 coalesce behind the middle and the lateral striae are almost hidden by scaling; interval 2 with a squamose costa from the base to the middle, then with five close conical tubercles to the top of the declivity and a few much smaller ones beyond; 3 with a higher broader costa from the base to one-third; 4 flat at the immediate base, then developing a fine low costa which turns into conical tubercles from the middle to near the declivity; 5 with the highest and broadest costa (formed of agglomerated tubercles) for a short distance at the base, followed by a few smaller tubercles; 6 with a complete row of conical tubercles from base to apex. Legs densely squamose, with very

short sparse erect black setae; femora with the basal two-thirds entirely grey, the apical third and the tibiae black with scattered small grey spots; the front tibiae with three or four small low tubercles on the dorsal margin, the mucro very short, the outer apical angle produced into a long fingerlike process; tarsi broad, the hind pair with joint 4 about 1.5 times as long as broad. Sternum with the middle coxae separated.

Length 8 mm.

S. Rhodesia: Mashonaland, Enkeldoorn dist., 1 9, 1910 (Miss E. S. Youngs).

Type in the British Museum.

Allied to S. adustus Pasc., from Bechuanaland, but in the latter species the entire suture and the whole of the declivity are pale; the prothorax has the punctures much smaller and the median sulcus deeper; on the elytra the rows of tubercles are more or less amalgamated to form continuous costae; the legs are much stouter, and the process on the front tibiae is only half as long.

Synthocus longicollis, sp. n. (Fig. 5)

 \bigcirc . Derm dull black, apparently bare above, but the foveae and depressions containing many small inconspicuous black scales, and along the middle of the suture a short stripe of dense erect black scales; on the underside the following areas are pale grey: the propleurae, the whole of the inflexed sides of the elytra approximately up to stria 6, the apical half of the declivity, the sides of the sternum, a lateral stripe on the venter and also a median stripe (except on ventrite 5).

Head appearing smooth with faint shallow foveolae until the earthy indumentum is removed, when this reveals a broad deep depression on the anterior half. Rostrum with the high carina bounding the epistome extending to the lateral angles in a rather flat curve. Prothorax elongate, much narrower than usual (6:5), slightly rounded laterally, widest at the middle, truncate at the base; the dorsum unusually smooth and nearly flat, with very sparse small punctures and a median sulcus which is rather broad and deep at the base but becomes rapidly shallower in front, ceasing at some distance from the apex; the apical third not depressed as usual and without the deep transverse hollow, but with only a short shallow longitudinal sulcus on each side of the median furrow. Elytra subquadrate, very nearly as long as the width at the

shoulders, truncate at the base, which is not wider than the base of the prothorax, the humeral outline deeply sinuate close to the basal angle, then almost straight to the end of the shoulder, the sides almost parallel behind the shoulders, but the posterior prominences projecting nearly as far as the shoulders; the dorsum abruptly and vertically declivous behind, with a transverse ridge at the top of the declivity which is interrupted as usual at the suture and has a low small tubercle on each side of the gap; the disk depressed in the middle, with the suture somewhat raised and with two fairly regular rows of foveae on each side of it, the areas external to this without any tubercles, the raised

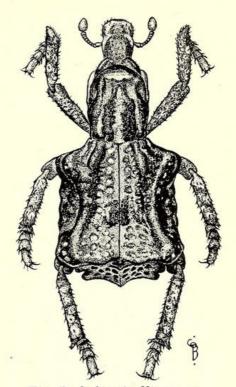


Fig. 5: S. longicollis sp. n.

28

ridges being smooth with a few very shallow foveolae and sparse small punctures; the costa at the base of interval 3 much less oblique than usual, being nearly parallel with the suture; interval 4 forming a strongly curved costa from the shoulder to the posterior prominence which overhangs interval 6, the latter without lateral tubercles but with those along the sides of the declivity well developed; no tubercles on the disk of the declivity, which bear large regular foveolae, the apices separately rounded, each bearing a low tubercle. Legs black with numerous grey spots and bands; the front tibiae with traces of low tubercles on the outer edge, the external apical angle with a short obtuse process; the hind tarsi with joint 4 a little more than twice as long as broad. Sternum with the middle coxae distinctly separated.

Length 8 mm.

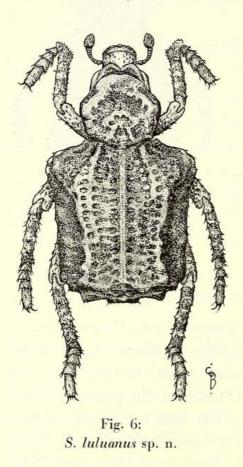
Nyasaland: Karonga (without details), 1

Type in the British Museum.

This species should be readily recognised by its relative long, narrow, smooth prothorax.

433

Synthocus luluanus, sp. n. (Fig. 6)



Head with large shallow foveae and traces of a narrow median ridge. Rostrum with the hind margin of the epistome forming a flat curve extending to the lateral apical angles. Prothorax somewhat transverse (7:8), obtusely angulate laterally, widest behind the middle and distinctly narrowed at the base, which is truncate; the dorsum rugosely foveate on the disk, with a broad depression across the anterior third and a very shallow broad median sulcus; the rounded raised smooth lateral costae that run from the lateral angle to the apex straight and not interrupted. Elytra with the base shallowly sinuate without any fringe, a little wider than the base of the prothorax, with the lateral angles more or less projecting, obt-

usely prominent at the shoulders and the sides narrowing slightly from there in a straight line to the abrupt declivity, which is angulate dorsally and quite perpendicular behind; the dorsum nearly flat as far as interval 4 and the suture not raised, or shallowly depressed with the suture costate, and with irregular shallow foveolae; interval 3 with a broad oblique costa near the base only; interval 4 arising from a tumid area within the shoulder and continuing as a subtuberculate costa to the top of the declivity almost in a straight line (not curving outwards to coalesce with 6); outside of interval 4 the surface slopes steeply to the subtuberculate ridge of interval 6, which forms the dorso-lateral margin and bears several low tubercles along the margin of the declivity; the disk of the declivity with variable shallow foveolae but no tubercles. Legs brown with whitish blotches; front tibiae not tuberculate externally, the outer apical angle forming a short rounded process; the hind tarsi with joint 4 more than twice as long as broad. Sternum with the median coxae separated.

Length 7.5—10.0 mm.

Belgian Congo: Lulua, Kafakumba, 1 ♂, XI. 1923 (type), 1 ♀, I. 1934 (F. G. Overlaet); Lukoshi-Luco (Luashi), 1 ♀, XI. 1937 (F. Freyne).

Type in the Royal Congo Museum.

Closely allied to S. dorsalis Fhs., which differs in having a longer prothorax (as long as broad) that is rounded laterally; the elytra have the shoulders more prominent and a high broad ridge at the base of interval 6, interval 2 has a rounded tubercle at the top of the declivity and two small tubercles on the declivity.

Synthocus regularis, sp. n. (Fig. 7)

clothed with dense whitish scaling: the propleurae, the inflexed sides of the elytra up to interval 7, the apical half of the declivity, the sides of the sternum and venter, and a narrow macular stripe down the middle of the venter.

Head comparatively smooth, with very shallow foveolae filled with scales. Rostrum with the hind margin of the epistome forming a flat curve extending to the lateral apical angles. Prothorax about as long as broad, moderately rounded laterally, widest at about the middle, and truncate at the base; the dorsum slightly convex on the disk and there with coarse subconfluent punctures and a shallow median

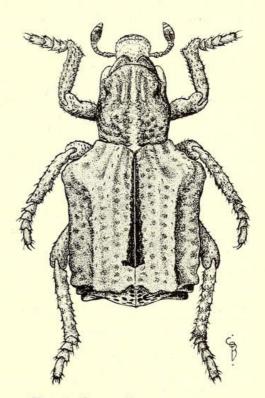


Fig. 7: S. regularis sp. n.

sulcus, the sides and apical margin smooth with small sparse

punctures; the apical third somewhat lower than the disk and separated from it by a broad transverse depression containing a transverse row of three large foveae. Elytra subquadrate, very nearly as broad as long, the shoulders broadly obtuse and projecting somewhat laterally, the sides almost parallel from behind the shoulders to the declivity; the basal margin with a broad shallow sinuation in the middle and two small ones on each side of it, the lateral angles extending somewhat beyond the base of the prothorax and projecting slightly forwards; the dorsum more or less depressed in the middle, interval 2 not at all raised between the base and the abruptly vertical declivity, interval 3 parallel with the suture but slightly curved inwards at the base, quite straight from behind the shoulder to the declivity, parallel with the suture, with only rudimentary tubercles which may even be absent, its apex remote from interval 6; interval 6 almost as distant from 4 as 4 is from 1, with the tubercles greatly reduced along its lateral area (but those on the declivity of normal size) and sometimes rudimentary; the declivity without tubercles on the disk, its upper edge sharply marginate, without definite tubercles. Legs brown, with large whitish spots; the front tibiae not tuberculate externally, its outer apical angle obtuse and slightly produced outwards; the hind tarsi with joint 4 more than twice as long as broad. Sternum with the median coxae separated.

Length 8—9 mm.

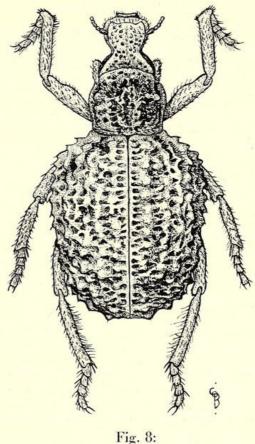
N. W. Rhodesia: Mwengwa (27° 41' E, 13°S.), 1 $\overline{\ }$, XI. 1913, 1 $\overline{\ }$, I. 1914 (type) (H. C. Dollman). S. Rhodesia: Victoria Falls, 1 \circ , XII. 1911 (R. Lowe Thompson). Belgian Congo: Lulua, Muteba, 1 \circ , V. 1912 (G. F. Overlaet — Congo Mus.).

Type in the British Museum; a cotype in the Congo Museum.

Synthocus ornithoglossi, sp. n. (Fig. 8)

Head with the frons smooth, with large variable separated punctures. Rostrum with the epistome forming a very high sharp carina which does not nearly reach the lateral angles, being strongly rounded and sometimes almost semicircular. Prothorax nearly

middle, the strong postocular lobes witht two small tubercles on the outer side (as seen directly from above); the dorsum with a backwardly-directed conical tubercle at about the middle of the dorsolateral margin on each side, the disk tumid, with very deep closely set foveae and a broad shallow median sulcus, the anterior third much lower than the tumid disk and with a flattened area on each side of the median sulcus; the elongate scales more or less erect and very densely packed, the anterior part and the middle of the disk with a few, very short, erect black setae. Elytra rotund, without prominent shoulders, only slightly longer than broad (7:6 mm.), regu-



S. ornithoglossi sp. n.

larly rounded laterally, widest at the middle, the base truncate not broader than the base of the prothorax, with a horizontally projecting fringe of sharply pointed scales; the dorsum strongly convex both longitudinally and transversely, the posterior declivity vertical but without any transverse ridge at the top; the whole surface closely set with very large subreticulate foveae, rows 1 to 6 being somewhat confused, but the lateral rows are regular; intervals 2, 4, 6 with a row of numerous small conical tubercles, those on 6 being usually slightly larger than the others, intervals 3 and 5 also with a row of tubercles which are rather less numerous and often smaller than the others. Legs with dense grey scales and numerous small brown spots, from which arise very short fine black setae; hind femora not exceeding the apex of the elytra; the front tibiae with the outer side quite smooth, the outer apical angle not produced laterally, the mucros short; the hind tarsi short, with joint 4 about 1.5 times as long as broad. Sternum with the median coxae contiguous; mesosternum with a tubercle

as long as broad, moderately rounded laterally, widest at the

clothed with long dense erect scales, but below the level of the median coxae.

Length 6.5—14.0 mm.

South West Africa: E. Namib Desert, near Naukluft Mts. 11 \bigcirc , 18 \bigcirc , I. and V. 1950 (R. G. Strey — type); Rehoboth, 96 exx., V. 1949 (Zumpt - Mus. Frey).

Type in the South Africa Museum; cotypes in the Musée Royale du Congo Belge, the Museum Frey, Munich, and the British Museum.

Mr. Strey found all his specimens in bulbs of an undescribed species of *Ornithoglossum* (Liliaceae), on which the larvae feed; it is interesting to note that in the allied South African genus, *Brotheus*, the foodplant of only one species has been recorded, namely, *B. praemorsus* Thnb., a single specimen of which was found at the root of an *Ornithoglossum* lily in a London garden in 1802.

The rotund shape of the elytra and the five very regular rows of small conical tubercles, which are all of approximately the same size, give this species a somewhat different appearance from its congeners. It is the only one of which a really long series has been available, and while the size varies greatly and the colour to some extent, the structural characters seem to be very stable, unlike those in many other species.



1956. "On the genus Synthocus Schonh. (Col., Curcul.)." *Entomologische Arbeiten aus dem Museum G. Frey Tutzing bei München* 7, 424–438.

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