A new species of Burmagomphus Williamson, from Thailand (Odonata).

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Through the courtesy of mag. scient. Palle Johnsen, of the Naturhistorisk Museum, Aarhus, I have been able to study a small but interesting collection of Odonata, made by him on the occasion of the "Thai-Danish Prehistoric Expedition 1960-62" in northwestern Thailand. This collection comprises 43 species and subspecies of which no less than three belong to the Gomphidae, a family usually poorly represented in material of expeditions. These species are *Paragomphus capricornis* (Förster) and two members of *Burmagomphus,* viz. *B. williamsoni* Förster and the widely different *B. johnseni,* here described as new.

The most recent morphological investigation of *Burmagomphus* in southeast Asia, including an account of some larval forms, is the one provided by me in 1964 (Zool. Verhand. Leiden, 69: 3-38, figs.). Although the discovery of yet another member of the genus was briefly announced in an Addendum to the last-mentioned paper (loc. cit.: 37-38), the species presently characterized had to be omitted from the key. Its probable affinities are, however, stated at the end of the description that follows.

The author wishes to express his sincere thanks to Mr. Johnsen for the opportunity to study this collection and for the permission to deposit the type of the new species in the Zoological Museum, Copenhagen. Most of the remaining dragonflies assembled are lodged in the collection of the Naturhistorisk Museum, Aarhus.

Burmagomphus johnseni sp. n. (figs. 1-5).

Material. — Thailand: 1 ♂ (adult, holotype), northwestern Thailand, Kwae Noi area, Ban Kao, 13-18. XI. 1961, P. Johnsen, no. 1286.

Description. — Labium with the prementum and the base of the median lobe pale yellow, the maxillae and remaining parts of labium, including the marginal bristles, light ochreous. Mandible-bases olive-grey with an oval glaucous central dot, the middle portion chestnut and the apices glossy black. Labrum, clypeus, and frons anteriorly, uniform dark olive-brown, save that the free margin of the labrum and the lateral edges of the postclypeus are ferruginous. Anterior surface of frons slightly swollen on either side of the middle and finely wrinkled, the transverse crest sharply pronounced and ridge-like, only the lateral angles being rounded. Horizontal portion of frons almost flat, somewhat rugose though rather shiny; a thick black basal stripe, widest laterally, runs along its base, most of the surface including the anterior remaining glaucous, the light mark thus enclosed widest in the middle and tapered laterally. Vertex and epicranium black, as are also the antennae; behind each of the lateral ocelli originates a blunt rugosely punctate tubercle, the diameter of which is a little larger than that of the ocellus. Dorsal surface of occipital plate glaucous, almost flat, its free margin scarcely emarginate in the middle and fringed with long erect black hairs; posteriorly the plate is rather swollen on each side of the middle and black in colour. Rear of the head black.

Prothorax deep black, except the anterior lobe which is bright yellow. Synthorax deep black, brightly marked with greenish yellow as shown in fig. 1; notal sclerites light green, axillaries all black. Ventral surface also light-coloured, but the metasternum for the greater part black.

Legs moderately long, unicoloured black, except the coxae and trochanters partly, which are brown. Posterior femur straight, relatively short, reaching back to a little beyond posterior border of first abdominal segment. Inner faces of femora and tibiae armed with numerous short tooth-like spines, irregularly arranged in rows, all of them directed caudad, the last spine of the outer row on all femora slightly longer than the rest.

Wings hyaline; neuration black. Fork symmetrical; antefurcal cross-veins 2.2 in fore wing, 1.1. in hind wing. Fore wing with 12.11 *Ax* and 8.9 *Px* of first series, hind wings with 9.8 and 8.8, respectively. Discoidal field of fore wing with two cell-rows up to level of nodus. Basal postcostal cross-vein absent. Costal side of all triangles fractured just before the apical angle, more di-

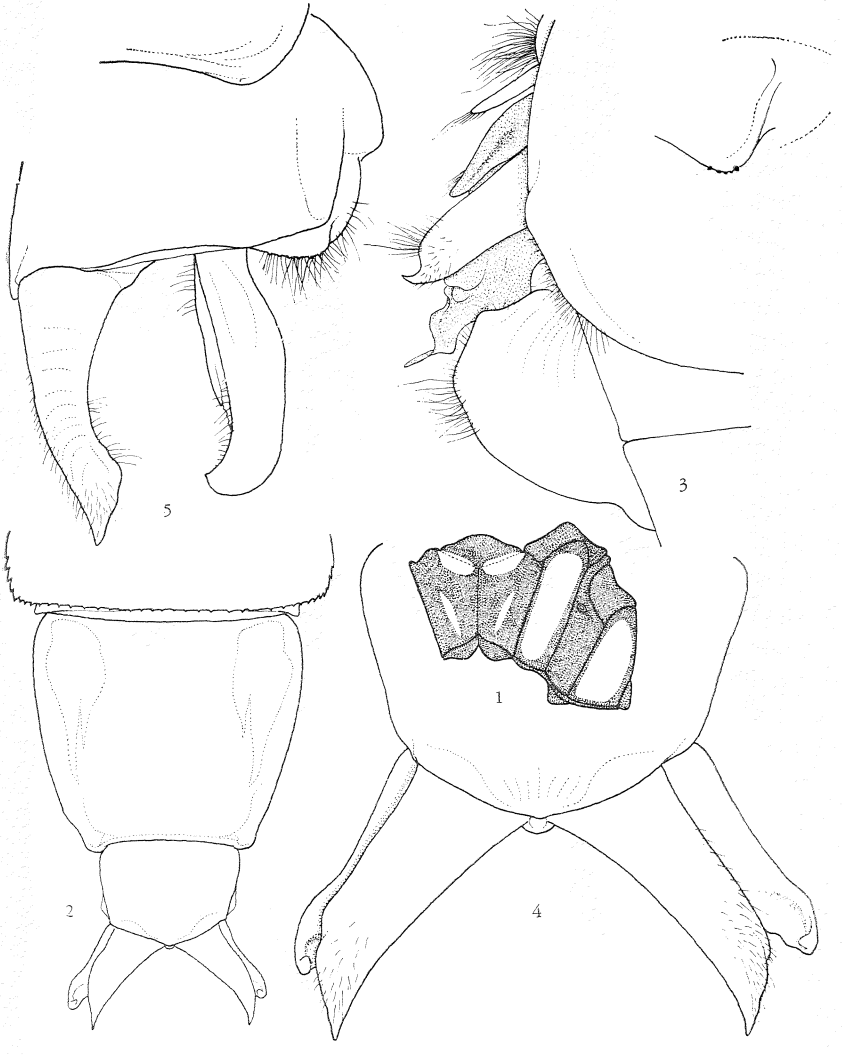

Fig. 1—5. *Burmagomphus johnseni* sp.n., ♂ holotype from Thailand. 1, colour-pattern of synthorax; 2, terminal segments of abdomen, dotted areas yellow; 3, accessory genitalia, left side view, penile segments stippled; 4 and 5, anal appendages, dorsal and oblique lateral view.

stinctly so in right hind wing. Anal loop one-celled. Anal triangle free, its costal side about one-half length of anal side; tornus of hind wing straight, rectangular and narrowly rounded off. Membranula linear, extending along full length of anal triangle, colourless. Pterostigma of moderate size, slightly swollen, with a brace-vein on all wings, covering four cells (three in left fore wing); colour greyish yellow between thick black nervures.

Abdomen slender, the basal segments moderately inflated; intermediate segments, from the middle of 3 to the apex of 6, slim and cylindrical, then suddenly and conspicuously expanded towards the end of 8, 7-9 moreover with distinct foliate expansions; segm. 9 still very broad at base but rapidly diminishing in width posteriorly; 10 small and only slightly broader than the intermediate segments (fig. 2). Colour predominantly black, with sharply defined greenish yellow markings, as follows: segm. 1 with a dome-shaped mid-dorsal spot along apical border, an oval spot upon the middle of the sides, and a smaller dot further down filling up the basal angle of segment; on each side of the dorsal yellow mark the posterior part of the tergite bears a conspicuous and dense tuft of backwardly directed black hairs. Basal two-thirds of segm. 2 with an elongate mid-dorsal spot, constricted medially and tapering to a blunt point apically; sides including the auricles entirely yellow; auricles prominent, oval, furnished with 6-7 triangular black denticles posteriorly; a small black area of the tergite, situated in front and above the auricles, also, covered with a tuft of black hairs, these being shorter than those on first segment. Segm. 3-6 each with a yellow dorso-lateral basal annule, incomplete below, placed in front of the transverse carina and finely indented by black from behind on mid-dorsum, the one on 3 largest; segm. 7 more extensively marked with yellow, the basal ring carrying a mid-dorsal bipartite off-shoot finely indented on either side by the black transverse carina. Basal portions of segm. 8 and 9 with a pair of conspicuous lateral ochreous spots shaped as shown in fig. 2. Intersegmental rings of segm. 7-8 and 8-9 likewise ochreous. Segm. 10 and anal appendages black. Sternal plates of 7-10 light olive-brown, but the ventral margins of the foliate expansions deep black.

Genital organs black (fig. 3); anterior lamina transverse, widest basally, deeply longitudinally sulcate, its apical fourth incised so as to form a pair of blunt tumid lobes beset with long black

bristles; anterior hamuli parallel, short, slender and rod-like, directed obliquely caudad; protective "guard" of penis at base of median segment heavily sclerotised, twice longer than wide, parallelsided and squarely cut off; posterior hamuli parallel, laterally compressed, relatively of small size, apex abruptly acuminate; vesicle large and globular, its anterior surface hollowed out to receive the apical portion of the penis. Anal appendages shaped as in fig. 4 and 5.

Measurements: abd. + appendages 31.0 mm, hind wing 25.2 mm, pterostigma 2.3 mm.

Female unknown.

This new species seems to find its nearest relative in *B. inscriptus* (Selys), an endemic from Java, which it resembles fairly closely in general appearance, thoracic markings and wing venation; for references see Lieftinck, 1954, Handlist Mal. Odon. (Treubia 22, suppl.: 89). The male of *B. johnseni* is easily distinguished from that of *inscriptus* by its smaller size, and slenderer forms, and particularly by the very different shape of its anal appendages. The species is dedicated to its discoverer.

Anmeldelse.

Victor Hansen: **Biller XXI. Snudebiller.** Larverne ved Sv. G. Larsson. Danmarks Fauna 69, Kbh. 1965, 524 pp. Pris ib. kr. 45.00 for medlemmer.

Leif Lyneborg: **Tovinger IV. Humlefluer, Stiletfluer, Rovfluer m. fl.** Danmarks Fauna 70, Kbh. 1965, 180 pp. Pris ib. kr. 27.00 for medlemmer.

Det er en stor glæde at se det liv, der er over serien »Danmarks Fauna« og ikke mindst over den entomologiske del deraf; med sine ¾ af alle dyrearter har entomologien jo også størst chance for at gøre sig gældende. Bindene bliver alt mere omfattende, mere anvendelige, mere dybtgående, efterhånden som serien skrider frem, og dette begrunder også den større og større anvendelse de, trods sproget, finder i udlandet, hvor seriens anvendelse nok står på højde med de fleste udenlandske tilsvarende serier — der jo forøvrigt alle er påbegyndt senere end »Danmarks Fauna«.

At kvaliteten er stadig stigende, ses ikke mindst af Victor Hansens Snudebillebind, der er hans foreløbig sidste, men samtidig en nyudgave af hans første bind, fra 1918 (hvilket forøvrigt mærkeligt nok intetsteds nævnes). Indledningen er udførligere, billedmaterialet langt bedre,