

Linzer biol. Beitr.	20/1	119-160	13.6.1988
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## REVISION ON THE SUBGENUS *PRIESNERIUS* MÓCZAR

### (HYMENOPTERA, CEROPALIDAE)

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**A b s t r a c t :** 9 taxa are revised and 11 are described as new on the basis of 91 specimens: *Ceropales* (*Priesnerius*) *arnoldi* ♀♂, *C. gaboni* ♀, *C. gessi* ♀, *C. grahamstowni* ♀♂, *C. kongoensis* ♀♂, *C. saegeri* ♀♂, *C. senegalensis senegalensis* ♀♂, *C. senegalensis mbouri* ♂ from the Ethiopian faunal region; *C. subhelvetica* ♀♂ from Senegal, Upper Volta, Israel; *C. yemeni* ♀♂ from Yemen, and *C. dubaica* ♂ from the United Arab Emirates, Dubai. The original grouping of *Priesnerius* etc. was re-established, i.e. to subgeneric rank. A key and distributional data are given.

### Introduction

The six European species of the genus *Ceropales* were ranged by WOLF (1965) into four subgenera, PRIESNER (1969, did the same but included further three species from Egypt with the subgenus *Aceropales*. The Asian-, African- and North American species of the genus *Ceropales* s.str., as well as for the majority of the Palaearctic, Ethiopian- and South African-species of *Hemiceropales* fitted well into this kind of grouping, thus, the subgenera were raised to generic level (MÓCZAR 1978, 1979, 1985, 1986, 1987, 1988). Since there is no sharp limit between the *Hemiceropales* and *Bifidoceropales*, both having bifid claws (especially considering the sculpture of the frons, the pronotum and the propodeum), furthermore, the herewith described species of *Priesnerius* (also indicate some kind of deviations on the hind claw. Among the species from Asia and Africa we find some

whose claw is bent to various degrees (either having a subapical tooth or without it), and finally some *Priesnerius* species are so similar to certain species of the *C. helvetica*-group and also to some others, especially when the colour and the sculpture are concerned, that many authors described new species into other genera than their own. (For example, in the type-material of Arnold's *C. karoensis multipictus* the species *C. arnoldi* was also included). For this reason, in the differential diagnosis of the latter species I list the most important discriminating features besides the figures of the male sternite 9 and the genitalia, which clearly separate them from their closest allies, on the other hand, I re-establish the original grouping of Priesner, etc., i.e. the subgeneric ranks, on the basis of the 3000 specimens representing 96 taxa.

The survey of 8 known and 1 new species of *Priesnerius* (MOCZAR 1978) was published previously, nevertheless, a new revision was necessitated as a consequence of the further 62 unidentified specimens remained after the world revision of the different groups of the Ceropalids (MOCZAR 1986-1988). The treatment of these 62 specimens resulted in 10 sp. nov. and 1 ssp. nov.: *C. arnoldi* ♂, *C. gaboni* ♀, *C. gessi* ♀, *C. grahamstowni* ♂, *C. kongoensis* ♂, *C. saegeri* ♂, *C. senegalensis senegalensis* ♂, *C. senegalensis mbouri* ♂ from the Ethiopian faunal region; *C. subhelvetica* ♂ (from Senegal, Upper Volta, Israel); *C. yemeni* ♂ (from Yemen); *C. dubai-ca* ♂ (from the United Arab Emirates, Dubai).

The 91 specimens studied in the present contribution are deposited in the following museums and in the collections of the private persons (the city names and the private persons on the locality labels referred to are in the text within parentheses). I am much indebted to the following curators and private persons for the loan of materials. Berlin = Zoologisches Museum an der Humboldt-Universität Berlin, GDR (Dr.F. Koch). - Budapest = Természettudományi Múzeum = Hungarian Natural History Museum, Budapest, Hungary (Dr.J. Papp). - Cape Town = South African Museum, Cape Town, Republic of South Africa (Dr.V.B. Whitehead). - Cairo = Plant Protection Research Institute of Insect Classification Section Cairo, Egypt (Prof.A.K. Moustafa). - Genova = Museo Civico di Storia Naturale "Giacomo Doria", Italia (Dr.R. Poggi). - Leningrad = Zoological Institute of the Academy of Sciences of the USSR, Leningrad (Dr.V. Tobias). - London = British Museum (Natural History), London, England (Dr.M.C. Day). - Tel Aviv = Tel-Aviv University, Zoological Museum, Tel Aviv, Israel (Dr.A. Freidberg

and Dr.Q. Argaman). - Tervuren = Koninklijk Museum voor Midden-Africa, Tervuren, Belgium (Dr.E. De Coninck). - Coll. Townes = Coll.Dr.H. Townes, Gainesville, Florida, USA. - Coll. Wasbauer = Coll. Dr.M.S. Wasbauer, Sacramento, California, USA. - Coll. Wahis = Coll.R. Wahis, Chaudfontaine, Belgium. - Washington = National Museum of Natural History, Smithsonian Institution, Washington, USA (Dr.A. Menke). - Wien = Naturhistorisches Museum Wien, 2. Zoologische Abteilung, Österreich (Dr.M. Fischer).

### Subgenus *Priesnerius* MOCZAR

*Aceropales* PRIESNER 1969: 115

*Priesnerius* MOCZAR 1978: 349, 351-362 ♀♂

*Priesnerius* MOCZAR 1979: 343-344 ♀♂

*Priesnerius* MOCZAR 1987: 121

The main characters of the subgenus are the rather uniform colour and sculpture and the rather differently developed claws of the hind legs. Thorax and abdomen usually richly coloured with white (-yellow) or rarely with ferruginous spots and bands, only exceptionally black entirely (*C. nigra*); inner and outer eye margins, tubercle and hump of pronotum mostly with white spot and only exceptionally black (*C. tihensis*). Frons remarkably raised between antennal sockets, surface with microscopically fine and very dense punctures, it seems finely granulate and shining rarely or sometimes also with larger punctures. Pronotal tubercle usually flat, rarely thickened (*C. deserticola*, *C. opacior*). Propodeum mostly flat posteriorly, only rarely convex basally (*C. bogdanovi*, *C. tobiasi*) in lateral view; surface with microscopically fine wrinkles and rarely with coarser clathrate or rugose; metapleural suture at most shallow, only moderately developed. Wings always normally developed and without typical differences between the species. Inner margin of the hind tibia above with a longitudinal furrow and bordered with a very fine row of dense hairs, probably for cleaning of body (antenna) (♂). Concerning the claws of the hind legs there are species or sexes without a subapical tooth: *C. arnoldi* ♀, *C. b. bogdanovi*, *C. b. sabulosa*, *C. dubaica*, *C. gaboni*, *C. gessi*, *C. grahamstowni*, *C. kongoensis* ♂, *C. polychloros*, *C. s. senegalensis*, *C. s. mbouri*, *C. tihensis*, and species or sexes with a tooth: *C. arnoldi* ♂, *C. kongoensis* ♀, *C. deserticola*, *C. honorei*, *C. subhelvetica*, *C. nigra*, *C. saegeri*, *C. tobiasi*, *C. yemeni*. Further details were given by MOCZAR

(1978).

The following 18 species and two subspecies belong to the subgenus: *C. arnoldi*, *C. b. bogdanovi*, *C. b. sabulosa*, *C. deserticola*, *C. dubaica*, *C. gaboni*, *C. gessi*, *C. grahamstowni*, *C. honorei*, *C. nigra*, *C. opacior*, *C. polychloros*, *C. saegeri*, *C. s. senegalensis*, *C. s. mbouri*, *C. subhelvetica*, *C. tihensis*, *C. tobiassi* and *C. yemeni*.

Type species: *Ceropales honorei* PRIESNER 1955 ♀♂.

### Key to the world species (♀♂)

- 1 Abdomen largely yellowish ivory-white, segments more or less brownish rufous basally, when tergites black basally then at least pronotum brownish rufous to a great extent. Other parts of thorax often partly rufous. Legs usually ferruginous with yellow or white markings. Propodeum flat in profile ..... 2
- Abdomen black, marked with ivory-white or deep yellow, never rufous, at most anterior margin of light band on tergites narrowly brownish. Pronotum black with a yellow or white band, sometimes entirely yellow or rarely black. Other parts of thorax black with white or yellow spots, never rufous. Propodeum at most more or less convex basally (Fig. 9) and flat posteriorly (Figs 12, 20) ..... 5
- 2 Pronotal tubercle conspicuously large, raised, width of thorax herewith broader than the same at tegulae. Shape of sternite 9 (♂) raised like a roof longitudinally with a row of hairs (Fig. 6). Last abdominal segments acute triangle apically, lower margin slightly convex in lateral view (♀). Frons usually flat ..... 3
- Pronotal tubercle normal, not raised, at most slightly thicker, width of thorax herewith at most as broad as, or narrower than the same at tegulae (meanwhile fore wings directed towards below). Shape of sternite 9 (♂) (Fig. 8), and of last segment (♀) different. Frons slightly convex ..... 4
- 3 Frons black with a small yellowish spot (♀). Propodeum black with large white streak laterally (♀) or ferruginous medially (♂). Hind tibia with a ferruginous and a yellow line exteriorly (♀♂). Abdominal tergites nearly wholly white, partly ferruginous basally (♀♂). Mesonotum with

- deep scattered and larger punctures. Posterior margin of pronotum smooth, shining and raised (Fig. 5, ♀♂). Scape nearly semicircularly rounded inside (♀). Sternite 9 (♂) raised longitudinally, like a roof with a row of erect and apically curved hairs along the middle (Fig. 6). 4,5-5 mm ..... *C. deserticola* PRIESNER (p.131)
- Frons with a broad yellow band between eyes. Propodeum black only basally, dark ferruginous nearly entirely and ivory-yellow on posteriolateral margins, as well as with a large pair of spots laterally. Hind tibia ferruginous at most with a yellow basal spot. Abdominal tergites rufous, more or less broadly margined with ivory-white behind. Frons, mesonotum with shallow punctures. Posterior margin of pronotum not raised. Scape only moderately rounded inside. 5-6 mm (Priesner) .....  
..... *C. opacior* PRIESNER ♀ (p.140)
- 4 Sternite 9 (♂) only hardly raised in front, with a row of erect and apically sharply curved hairs (Fig. 8). Tergite 7 broadly emarginated. Mesepisternum with deep and scattered punctures. Pronotum black with a white disc and hump. Abdomen brownish ferruginous with broad and continuous ivory white bands on tergites 1-4. 3,8 mm .....  
..... *C. dubaica* sp.n. ♂ (p.132)
- Sternite 9 (♂) raised longitudinally and with a sharp keel on its basal two-thirds. Tergite 7 not emarginated (♂). Mesepisternum with fine and scattered punctures. Posterior margin of pronotum yellowish white with indistinct ferruginous margin on front (♂), often black laterally in the middle (♀♂) and also ferruginous along the lateral border (♂) or largely yellowish white, sometimes partly ferruginous (♀). Tergites 1-3 with continuous white bands (♂) or segments nearly entirely yellowish only 1-3 partly orange ferruginous basally (♀). Last abdominal segment acute triangle apically and lower margin straight (Fig. 7). 4,5-6 mm ..... *C. polychloros* GUSSAKOVSKIJ (p.140)
- 5 Body nearly entirely black or extensively yellow. Larger species: 6,5-10 mm. Propodeum remarkably convex basally, declivous part concave (Fig. 9) or rather flat ..... 6
- Body only partly black and moderately yellowish white. Smaller species: 3,3-5,8 (exceptionally 6,5) mm. Propodeum at most hardly convex basally, declivous part flat and long (Figs 12, 19-20) ..... 9

- 6 Body (also flagellum) entirely black, except the yellow streak beginning on clypeus laterally and ending in ocular sinus, these streaks interrupted on clypeus of male. Legs light rufous excepting black coxae and trochanters (♀); basis of all coxae, a spot on hind tibiae apically and last tarsal joints of hind legs dark brownish black (♂). Propodeum (Fig.9) coarsely rugose (♀) or rugulose (♂). Claws of legs (also the hind ones) only hardly curved and with a subapical tooth (Fig. 2). Last abdominal segment rounded (♀), sternite 9 excised (♂) apically. 8-9 mm .....  
..... *C. nigra* RADOSZKOWSKI (p.139)
- Body extensively yellow: lower face, pronotum, often whole propodeum. Antennal joints 1-2 yellow, medial ones ferruginous, last ones black ... 7
- 7 Propodeum finely granulated basally, with fine, transverse wrinkles medially on its declivous part. Claw of hind leg hardly curved, nearly straight and with a subapical tooth similarly to the other legs. All tergites with broad yellow bands posteriorly, on 1 and 2 remarkably broad; posterior margin of tergite 1 narrowly brown. Last segments (♀) truncate apically (Fig. 10). 6,5 mm ..... *C. tobiasi* MOCZAR ♀ (p.147)
- Propodeum coarsely, transversally wrinkled, finer only on its declivous part (♀) and on male. Claws of hind legs curved apically at 45° and without a subapical tooth (Fig. 1), only claws of fore and middle legs bearing a tooth ..... 8
- 8 Last 4 antennal joints (sometimes partly also 5th) (♀) or last 5 (♂) black. Tergites 1-2 with remarkably broad yellow posterior margin (on male narrower), tergite 3 black, at most with a very small yellow spot (♀), or tergite 3-4 black (♂); posterior margin of tergite 1 with a very narrow brownish black streak, further tergites with large yellow spots. Mesopleura with 1 or 2 yellow spots beneath. Hind femur largely ferruginous with a black and yellow ring apically. Larger (7)9-10 mm .....  
..... *C. bogdanovi bogdanovi* RADOSZKOWSKI (p.130)
- Last 5 (♀) or 6 (♂) antennal joints black. Tergites 1-2 with broad yellow posterior bands, 3 (♀) or 3-4 (♂) black, yellow band of tergite 1 interrupted (♂) medially. Mesopleura usually black. Hind femur ferruginous basally, often broadly black in the middle and yellow apically. Sculpture of propodeum finer than in nominate species. Smaller 6,8-8(10) mm .....  
..... *C. bogdanovi sabulosa* F. MORAWITZ (p.131)

- 9 Ivory-white bands of abdomen 1-5 (♀) or 1-3 (♂) continuous, semicircularly emarginated on both sides. Frons, mesonotum remarkably shining (more on ♀), with microscopically fine and very dense punctures. Flagellar joints gradually thickened towards the apex of antenna. Last abdominal segments extended in a small acute angle (Figs 11, 13). Propodeum granulated ..... 10
- White bands of abdomen broadly, 1 (♀) or 1-2 (♂), at most rarely, narrowly interrupted and shallowly emarginated laterally. Frons, mesonotum mat, rarely weakly shining with fine and very dense, sometimes also with scattered larger punctures ..... 11
- 10 Pronotal tubercle and hump yellow or brownish. Lower side of middle and hind coxae, trochanters, femora, tibiae and tarsi ferruginous except the yellow streaks and spots (♀♂). Claws on fore leg without a subapical tooth (♀♂), middle and hind legs (♀♂) with a tooth each (Fig. 3). Head distinctly narrowed behind eyes in superior view (♀♂). Labrum, clypeus except the two brown narrow spots below medially (♀), spots of supraclypeal area along the upper margin of clypeus (♀), a broadly interrupted line of inner eye margin, two minute spots between antennal joints 1-2 below, yellowish. Last segments: Fig. 13. Propodeum nearly flat in lateral view (Fig. 12). 3,5-5,5 mm .. *C. honorei* PRIESNER (p.137)
- Pronotal tubercle and hump black. Femora dark brown with yellow spot apically, tibiae brownish, yellowish basally, fore and middle ones, as well as tarsi largely yellow outside. Claw of all legs without tooth before apex (Fig. 4). Head distinctly broader and gradually narrowed behind eyes, in superior view. Labrum, lower margin of clypeus narrowly, lateral corners like a romboid, two minute spots between antennal sockets and spots on lower side of antennal joints, yellowish. Last segments: Fig. 11. 3,8 mm ..... *C. tihensis* PRIESNER ♀ (p.147)
- 11 Femora and tibiae largely, tarsi partly rufous ferruginous ..... 12
- Femora and tibiae largely, tarsi partly brownish black, at least on the middle and hind legs ..... 14
- 12 Lower side of middle coxa black, without a basal white spot. Lower half and the broader longitudinal streak in clypeus medially, mostly connecting the medial spot of supraclypeal area and a small spot on excavation of eye, as well as a narrow streak on outer eye margin above, white (♀), the white marking on lower face sometimes similar

- to a reversed T (♂). A narrow orbital groove distinct. Often also coxae and trochanters largely ferruginous. The row of tomentose hairs of hind metatarsus extending nearly to the half length of metatarsus, hairs about as long as the breadth of the joint (Fig. 15) (♂). 3-5,7 mm ..... *C. arnoldi* sp.n. (p.128)
- Lower side of middle coxa with a white basal spot (♀). Lower face entirely, also clypeus, labrum and mandible, inner and outer eye margin white, at most clypeus with small brownish spot (♀) or supraclypeal area partly black and clypeus with a white spot (♂). Orbital groove not developed. Tomentose hairs of hind metatarsus (♂) at most as long as one-third breadth of the joint ..... 13
- 13 Frons distinctly broken below fore ocellus, with larger and rather deep punctures. Propodeal sulcus beginning with a broad equilateral triangle and reaching nearly the middle of segment (Fig. 17) with some transversal wrinkles. Mesepisternum with deep and rather dense punctures. ♂: The row of tomentose hairs very short, extended shorter than one-third of the length of joint, hairs about as long as one-third the breadth of a joint. Mandible, labrum, clypeus nearly entirely black. 4,5-6,5 mm ..... *C. subhelvetica* sp.n. (p.144)
- Frons convex, without larger and deep punctures, only with a row of some punctures near to eye margin. Propodeal sulcus narrow, resembling an isosceles triangle and ending before the middle of the segment (Fig. 18). Mesepisternum only with fine and scattered punctures. 4,4 mm ..... *C. gaboni* sp.n. (p.133)
- 14 Scutellum and postscutellum conspicuously flat and hardly elevated above the level of notum (especially on ♀), in lateral view. Propodeum remarkably elongated, nearly as long as the broadest diameter medially (23 : 25 ♀, or 25:20 ♂). Pronotal disc flat, lower corner pointed and bent down nearly to the half of fore coxa. Sternite 9 (♂) truncated apically (Fig. 33). 4,1-5 mm ..... *C. kongoensis* sp.n. (p.137)
- Scutellum and postscutellum normally convex and at least scutellum distinctly raised above the level of notum (Fig. 20). Propodeum, pronotum not elongated, length of propodeum at least three-fourths of its breadth. Sternite 9 different ..... 15
- 15 Pronotal disc flat, not thickened (Fig. 20). Posterior margin of pronotum



- tum at most with a narrow, more or less interrupted white line medially, sometimes entirely black. Propodeal sulcus forming an equilateral triangle (Fig. 21) or continued in a very narrow furrow to the middle of segment ..... 16
- Pronotal disc distinctly thickened, more or less convex (e.g. Fig. 19). Pronotum with well developed and exceptionally interrupted white band posteriorly, reaching to lateral tubercle. Propodeal sulcus different. Frons with microscopically fine and dense punctures, sometimes with larger punctures at least along eye margin above ..... 17
- 16 Lower face entirely white (♀♂). Metapleural suture distinct (Fig. 20). Propodeal sulcus forming like to an isosceles triangle basally and continued in a very narrow furrow to the middle of segment. Claw of hind leg with a subapical tooth. Length of propodeum three-fourths (♀) or four-fifths (♂) of its breadth. 4,4-4,8 mm ..... *C. saegeri* sp.n. (p.140)
- Lower face largely black (Fig. 22). Metapleural suture indistinct. Propodeal sulcus forming like to an equilateral triangle (Fig. 21). Claw of hind leg without a subapical tooth. Propodeum nearly as long as its broadest diameter (18:20). 3,9 mm ..... *C. gessi* sp.n. (p.134)
- 17 Frons convex, gradually bending towards antennae and without larger punctures. Mandible largely black (♀♂). Clypeus and lower supraclypeal area largely white (♀) or nearly entirely black (♂) (Fig. 23). Bands of first abdominal tergites broadly interrupted (♀♂). Propodeal sulcus narrow (Fig. 24 ♀♂). 3,7-4,7 mm ..... *C. grahamstowni* sp.n. (p.135)
- Frons distinctly, obtuse angularly bent below ocelli and separated by a feeble ridge into a smaller and a larger flat area, or moderate on some males. Frons with few fine or with more rather larger and deeper punctures. Mandible nearly always white (♀) or black (♂). Bands of tergite 1 usually hardly or not, on 2 only narrowly interrupted (♀♂). Metapleural suture not developed ..... 18
- 18 Orbital groove developed only in a shining line (♀) or deep and broad (♂). Frons with deep, here and there dense punctures (♀). Flagellar joints black also below or at most first joints dark brownish (♀♂). Mandible, lower margin of labrum, clypeus, excepting a longitudinal black streak and supraclypeal area partly, yellowish white (♀), only exceptionally with extended black (♀), or nearly entirely (also medially)

- black (♂). Middle coxa black basally (♀♂). 4,1-5.8 mm .....  
 ..... *C. yemeni* sp.n. (p.147)
- Orbital groove distinct, about one-third of the length of outer eye margin. Frons with scattered distinct, partly finer punctures. Flagellar joints brownish yellow below (♀♂). Mandible, labrum and clypeus white entirely, only mandible exceptionally black (♀) or only mandible and lateral margins of clypeus black above (♂). Middle coxa basally with a round white spot (♀) ..... 19
- 19 White band of tergite 1 broadly interrupted medially. Propodeal sulcus broader, similar to an isosceles triangle. Clypeus white only along upper lateral margins with black spots or streaks. 3,4-5,4 mm .....  
 ..... *C. senegalensis senegalensis* sp.n. (p.142)
- White band of tergite 1 continuous. Propodeal sulcus very narrow. Clypeus black only a quadrangular spot medially above and a narrow streak on lower lateral margin white exceptionally, similar to the nominate species. 3,3 mm ..... *C. senegalensis mbouri* ssp.n. (p.144)

### Description of the species

#### *Ceropales (Priesnerius) arnoldi* sp.n.

*Ceropales karoensis* race *multipictus* ARNOLD 1937: 91 ♀ ♂ partim

**S p e c i m e n s e x a m i n e d :** 6 ♀, 4 ♂. Type material: Namibia = "Okahandja. 19-29. xii. 1927", "S.W. Africa. R.E. Turner. Brit.Mus. 1928-53.", "British Museum", "*C. karoensis* r. *multipictus*, var: - ♀ det. G. Arnold", "Paralectotypus ♀ *Cerop. karoen. r. multipictus* Arn. det. Móczár 1986", "Holotypus *Cerop. ♀ (Priesnerius) arnoldi* Mócz. det. Móczár 1987" ♀ holotype (British Museum (Nat.Hist.) London). - Paratypes: with the same labels, excepting Arnold's det. label and "Holotypus etc...", but with "Paratypus *Cerop. (Priesnerius) arnoldi* Móczár det. Móczár 1987" 1 ♀, 1 ♂ (without abdomen) (London) and 1 ♀ (Hym.Typ.No. 3787 Budapest); with the same labels as paratype and "South African National Museum Bulawayo 1981" 1 ♂ (Cape Town); with the same locality but with date "24.ii.-1.iii.1928", "S.W. Africa. R.E. Turner. Brit.Mus. 1928-157", "Type ♂ *Ceropales karoensis* r. *multipictus* Arn. det. G. Arnold" red label, "B.M. Type Hym. 19.781b", "Paralectotypus ♂ *Cerop. karoensis multipictus* Arn. det. Móczár 1985", "Paratypus *Cerop. (Priesnerius*

etc. ..." 1 ♂ (London); with the same labels excepting Arnold's det. label, but with "*Cerop. (Priesn...)*" 2 ♀ (one without abdomen) (London), as well as 1 ♂ (Hym.Typ.No. 3788 Budapest); "S.W. Africa (31) Okahandja 2-4. II. 1972" "Souther African Exp. B.M. 1972-I" 1 ♀ (Hym.Typ.No. 3789 Budapest).

♀. - Length 4-5,7 mm. Black, labrum entirely, clypeus more or less largely, except the small pale brownish spots medially and the angularly curved black margin on upper part (Fig. 14: holotype), a spot on supraclypeal area medially, two spots on inner eye margin, a narrow short line on outer eye margin above, lower side of antennal joints 1-2, hind margin and hump of pronotum, tegula basally, postscutellum, posterior corner of propodeum, narrow and in front sinuate streaks on tergites 1-4 laterally, tergite 6 nearly entirely, outer side of fore coxa below, a small spot on middle and hind coxae, as well as on femora apically, fore tibia, both fore and middle tarsal joints in front, two elongate spots on the base and apex of the middle tibia outside, and tibial spurs, white; inner spur of hind tibia infuscated basally. Apex of mandible, lower side of flagellar joints 1-2(3), hind coxa apically, legs from trochanters to tarsal joints, except the brownish black hind tarsal joints, and the slightly infuscated hind tibia in front, brownish ferruginous. Wings normal, hardly infuscated apically, veins brown, pterostigma yellowish brown. Body, especially head in front, propodeum and ventral side of thorax with short silvery pubescence.

Head hardly broader than long (32: 30, excluding labrum). A shallow orbital groove about one-third as long as the length of outer orbit. Ocelli in an acute angle, POL: OOL = 5:7. Frons convex, sculpture granulated, without larger punctures. Antenna short, flagellar joints hardly longer than its breadth. Pronotal disc thickened, similarly to Fig. 12 (of *C. honorei*). Mesonotum mat, with some scattered fine, mesepisternum with larger punctures. Propodeum flat in lateral view, medial sulcus (Fig. 16) not reaching the middle of the segment, surface with microscopically fine wrinkles transversely. Metapleural suture not developed. Last abdominal segment strongly compressed laterally and pointed apically, lower margin convex in lateral view, resembling Fig. 7 (of *C. polychloros*). Claws of fore and middle legs with a minute subapical tooth, of the hind legs gradually curved at 45° apically and without a subapical tooth.

♂. - 3-4 mm. Similar to female, but differs as follows: The white spot on clypeus reduced, usually similar to a reversed T. Lower side of flagel-

lum brownish. Narrow lateral streaks also on tergite 5, tergite 6 black, 7 nearly entirely white. Orbital groove longer, as long as nearly half the length of outer eye margin. Median sulcus also longer, reaching the middle of propodeum. Last abdominal tergite narrowly but deeply emarginated apically. Hind metatarsus appressed apically with a row of tomentose erect hairs inside, which extending nearly to the half length of metatarsus, hairs about as long as half the breadth of joint (Fig. 15). Claw of hind legs with a hardly perceptible rudimentary tooth medially. Sternite 9 convex, deeply excised apically (Fig. 25). Penis valva and right part of genitalia inside: Figs 26-27.

This species is rather variable in colour. The black extends on clypeus to such a degree, that white spot resembles a reversed T (♀♂). Supraclypeal area usually (♂) or sometimes black also laterally, along the inner eye margin (♀). Fore and middle coxae, as well as lateral margin of pronotum rarely and partly ferruginous below hump.

It is related to *Ceropales multipicta* ARNOLD 1937 (subg. *Ceropales* s.str., *C. helvetica*-group), which was established by Arnold on his label (cf. paratypes) and which was referred to earlier (MOCZAR 1988). It differs from it by the not strongly rectangularly curved hind claws (♀♂), the not deep and not broad orbital groove, by the distinctly shorter hind tibia and tarsi:

*C. multipicta* = tibia:tarsal joints 1+2+3+4+5+claw = 39:24+10+9+6+7+2

*C. arnoldi* = tibia:tarsal joints 1+2+3+4+5+claw = 33:21+9+7+4,5+5+2

*C. arnoldi* differs moreover from *C. multipicta* by the longer row of tomentose and erect hairs of hind metatarsus reaching nearly to the middle of the joint (♂), by the quite different sternite 9, penis valve and genitalia (Figs 25-27) comparing those of *C. multipicta* (MOCZAR 1988 Figs 65-66), etc.

D i s t r i b u t i o n : Namibia.

*Ceropales (Priesnerius) bogdanovi bogdanovi* RADOSZKOWSKI

*Ceropales Bogdanovii* RADOSZKOWSKI 1877: 13 ♂ T.VI Fig.9

(*Ceropales bogdanovi*: FOX 1892: 60)

(*Ceropales Bogdanovii*: DALLA TORRE 1895: 90)

(*Ceropales bogdanovii*: DALLA TORRE 1897: 341 ♂)

(*Ceropales bogdanovi* : GUSSAKOVSKIJ 1931: 6, 16 ♀♂)

(*Priesnerius bogdanovi*: MOCZAR 1978: 353, 357 ♀♂ syn.n.)

*Sph*(? ex) *fulvicornis* PALLAS nom. in coll. (Berlin)

**S p e c i m e n s e x a m i n e d :** 3 ♀, 1 ♂. Non paratypic material: Turkey = Tauria, Pallas, 1 ♀ (Berlin). - Russian SSR = Kilintschi okr. Astrachan 25 May 1930 Oglobik, 1 ♂ (Budapest); Ak-Metsch bliz Hivy (S. from Ural) 23 May 1927 Zimin, 1 ♀ (Budapest). - Azerbaidzhan SSR = Dagestan, Tuprozsk 1 Aug 1960, 1 ♀ (Coll. Wahis).

**D i s t r i b u t i o n :** Sarafschan (RADOSZKOWSKI 1877) (Uzbek SSR not Turkmen SSR as MOCZAR 1978). In Rossia medioorientali ad Volgam inferiorem et in Turkestanian (GUSSAKOVSKIJ 1931). Azerbaidzhan SSR (MOCZAR 1978). Turkey.

*Ceropales (Priesnerius) bogdanovi sabulosa* F. MORAWITZ stat.nov.

*Ceropales sabulosa* F. MORAWITZ 1890: 184 ♀♂

(*Ceropales sabulosa*: DALLA TORRE 1895: 93)

(*Ceropales sabulosus*: DALLA TORRE 1897: 345 ♀♂)

(*Ceropales sabulosa*: GUSSAKOVSKIJ 1931: 16 ♀♂ (as syn. of *bogdanovi*)

(*Priesnerius sabulosus*: MOCZAR 1978: 354, 358 ♀♂)

**S p e c i m e n s e x a m i n e d :** 3 ♀, 1 ♂. Type material: Russian SSR = Ryn-Pesski, lectotype ♀ (Leningrad) (MOCZAR 1978); Astrachan, 1 ♂ paralectotype (Budapest) (MOCZAR 1978). - Non paratypic material: Kazakh SSR = Golodnaya step, Jakobson, 1 ♀ (a transit form) and Karagand, 1 ♀ (Budapest).

Since this species differs only in the colour, partly in the finely sculptured propodeum and in the distribution from *C. bogdanovi*, I suggest to regard it only as a ssp., and not a valid species as I did before (MOCZAR 1978).

**D i s t r i b u t i o n :** Ryn-Pesski.M.Bogdo (F. MORAWITZ 1890). Russian, Uzbek and Kazakh SSR, border territories along China (MOCZAR 1978).

*Ceropales (Priesnerius) deserticola* PRIESNER

*Ceropales deserticola* PRIESNER 1955: 23, 24 ♀♂

(*Ceropales deserticola*: PRIESNER 1966: 152)

(*Ceropales (Aceropales) deserticola*: PRIESNER 1969: 115)

(*Priesnerius deserticola*: MOCZAR 1978: 352, 354 ♀♂ Figs 13-14)

(*Priesnerius deserticola*: MOCZAR 1979: 343)

**S p e c i m e n s e x a m i n e d :** 4 ♀, 2 ♂. Type material: Egypt = Fayoum, ♀ lectotype (Wien) (MOCZAR 1978); Wadi el Tih, 2 ♂ paralectotypes (Wien) (MOCZAR 1978); "Manshiet Radwan ..." 1 ♀ paralectotype, new designation, (Cairo). - Non paratypic material: Egypt = Dahschour Reg. Caire 2 May 1958 Pulawski, 1 ♀ (Wien); Ghizeh 15 May 1958 W.J. Pulawski, 1 ♀ (Budapest).

**D i s t r i b u t i o n :** Egypt (PRIESNER 1955).

*Ceropales (Priesnerius) dubaica* sp.n.

**S p e c i m e n e x a m i n e d :** 1 ♂. Type material: "U. Arab. Em: Dubai Nakhalai 1984 IV-21/25 mal. trap E. Sugden" ♂ holotype, "Holotypus *Cerop. (Priesnerius) dubaica* Mócz. ♂ det. Móczár 1987" (Coll. Wasbauer).

♂. - Length 3,8 mm. Black, labrum, clypeus, supraclypeal area, inner and outer eye margin, a spot between antennal sockets and on antennal joints 1 - 2 below, disc, tubercle and hump of pronotum, tegula, narrow streak on mesonotum laterally, a broader one medially, and a larger ones on posterior corners of propodeum, posterior bands on tergites 1-5 interrupted medially only on 5, three spots on 6, tergite 7 nearly entirely, streaks on coxae and femora outside apically, fore and middle tibia outside, the same tarsi entirely, lateral margin of sternite 9, white. Last antennal joints below, apical half of mandible, abdomen and legs largely brownish ferruginous; hind tibia and tarsi darker infuscated above, fore and middle tibial spurs white. Wings normal, hardly infuscated, veins and pterostigma brown. Body, especially lower face, propodeum and ventral side of mesothorax with short silvery pubescence.

Head hardly broader than long (50: 47), only moderately narrowed behind eyes. Ocelli in an acute angle, POL : OOL = 9 : 10. Frons convex below ocelli, surface finely granulated and slightly shining. Antenna short, reaching at most the middle of thorax, joints short, usually hardly longer than its breadth, length (and breadth) proportions of antennal joints 1-8 = 10(7) : 5(5) : 7(5) : 7(6) : 7(6) : 7(6) : 7(7) : 7(7). Pronotal disc convex, thickened in lateral view, with rather deep and longitudinally wrinkled hollow between hump and tubercle, latter slightly raised, but the diameter of thorax here not broader than across tegulae, viewed from above. Mesonotum and mesepisternum with deep and scattered punctures. Postscutellum hardly raised above the level of scutellum and propodeum, in lateral view. Propodeum flat, surface very finely wrinkled transversally, median sulcus

short, forming an equilateral triangle basally and continuing in a narrow line and not reaching the middle of segment. Abdominal segment 7 broadly emarginated. Sternite 9 hardly raised longitudinally, with a row of erect and sharply curved hairs apically (Fig. 8). Claws of hind legs without a subapical tooth.

♀. - Unknown.

**D i s t r i b u t i o n :** United Arabian Emirates: Dubai.

*Ceropales (Priesnerius) gaboni* sp.n.

**S p e c i m e n e x a m i n e d :** 1 ♀. Type material: Gabon = "Gabon Tchibanga XI. 1984 A. Pauly leg", "Wahis", "Holotypus *Cerop. (Priesnerius) gaboni* Móczár ♀ det. (Móczár) 1987" ♀ holotype (Coll. Wahis).

♀. - Length 4,4 mm. Black, mandible, labrum, clypeus, supraclypeal area, inner eye margin with pointed apex above ocular sinus, outer eye margin, a spot between antennal sockets, on antennal joints 1-2 below, posterior margin of pronotum with tubercle, hump and a very narrow streak before pointed apex laterally, tegula basally, a minute spot on scutellum, postscutellum, lateral corners of propodeum, lateral streaks on tergites 1-4 deeply emarginated in front, tergite 6 largely, fore coxa below, middle and hind coxae apically, a spot on middle coxa basally and on femora apically outside, fore tibia and tarsi, joints 1-4 in front, middle tibia basally and apically, as well as tarsal joints 1-4 in front, all tibial spurs, white. Flagellar joints 1-2 below, femora-tibiae largely, except the blackish apex of hind tibia, middle and hind femora above and hind tarsal joints rufous ferruginous. Lateral side of abdomen brownish. Wings slightly infuscated apically, veins and pterostigma brown. Body, especially frons, propodeum and thorax ventrally with short silvery pubescence.

Head hardly broader than long (33:30), narrowed behind eyes. Ocelli in an acute angle, POL:OOL = 3:7. Frons convex behind fore ocellus, surface nearly mat, without larger and deep punctures, only with a row of some fine punctures along the eye margin above. Antenna short, flagellar joints about one and a half times longer than its breadth. Temple narrow, orbital groove absent. Pronotal disc short, slightly convex (Fig. 19) in lateral view; lateral side concave with some fine wrinkles longitudinally; pronotum, mesonotum similarly to frons with some fine and hardly discernible punctures. Scutellum and postscutellum remarkably raised above

the level of notum (Fig. 19). Propodeum conspicuously flat, medial sulcus narrow, resembling an isosceles triangle and ending before the middle of the segment (Fig. 18), surface with finer sculpture than on *C. subhelvetica*. Mesepisternum only with fine scattered punctures. Sternal lobe pointed apically. Last segment compressed laterally with a nearly straight margin below. Hind claw without a subapical tooth.

♂. - Unknown.

D i s t r i b u t i o n . Gabon.

*Ceropales (Priesnerius) gessi* sp.n.

S p e c i m e n e x a m i n e d : 1♀. Type material: Rep. of S. Africa = "Grahamstown XI. 12-30. 70 S. Afr. Fred Gess", "Holotypus Cerop. (*Priesnerius*) *gessi* Móczár . ♀ det Móczár 1987" ♀ holotype (Coll. Townes).

♀. - Length 3.9 mm. Black, a small spot on mandible basally, labrum and clypeus partly (Fig. 22), supraclypeal area medially, inner eye margin with an interrupted line, a spot between antennal sockets, antennal joints 1-2 below, a small streak on outer eye margin above, a hardly discernible streaks on pronotum interrupted medially, a spot on tubercle and hump, two spots on postscutellum, one on the corners of propodeum posteriorly, narrow and in front sinuate streaks on tergites 1-3, a larger spot on 5 and on fore coxa below, minute spots on the middle and hind coxae outside apically, as well as on middle tibia basally, fore tibia and tarsal joints 1-4 in front and middle and hind tibial spurs, white. Apex of mandible, flagellar joints 1-2 below, inner side of fore femur partly, fore and middle tibiae and tarsi below and apex of middle femur brownish ferruginous. Wings slightly infuscated, veins brown, pterostigma yellowish brown. Body especially lower face and thorax ventrally with short silvery pubescence.

Head nearly as long as its breadth (27:30), slightly broadened behind eyes, temple hardly thickened with a short shining line above mandible. Ocelli in an acute angle, POL:OOL = 3:7,5. Frons convex, weakly shining, granulated, with some punctures above ocular sinus. Antenna short, flagellar joints as long as one and a half of their breadth. Pronotal disc flat, lateral corner pointed but short, groove with some longitudinal wrinkles. Mesonotum, mesepisternum mat with indistinct and scattered fine punctures. Scutellum distinctly convex, postscutellum lies remarkably lower than scutel-



lum. Propodeum flat over its entire length and nearly as long as its broadest diameter (18:20), sulcus short forming an equilateral triangle (Fig. 21), surface with microscopically fine wrinkles transversely, without punctures; metapleural suture not developed. Last abdominal segments resemble those of Fig. 7 (*C. polychloros*). Claw of hind leg without a subapical tooth.

♂. Unknown.

This species is similar to *C. (P.) arnoldi*, but chiefly differs by the unraised postscutellum, the short sulcus of the propodeum, by the unpunctured frons, by colour, etc.

D i s t r i b u t i o n : Republic of South Africa.

*Ceropales (Priesnerius) grahamstowni* sp.n.

S p e c i m e n s e x a m i n e d : 3 ♀, 1 ♂. Type material: Rep. of S. Africa = "Grahamstown XII.1-16. 70 S. Afr. Fred Gess", "Holotypus *Cerop. (Priesn.) grahamstowni* M. ♀ det. Móczár 1987" ♀ holotype (Coll. Townes). - Paratypes: "Grahamstown X-14-70 So. Afr. H. & M. Townes" 1 ♂ (allotype) (Coll. Townes). - Zimbabwe = "Zimbabwe Chishawasha VIII. 1980 A. Watsham" 1 ♀ (London); "Rodesia = Salisbury Chishawasha X.1979 A. Watsham, 1 ♀ (Hym.Typ.Nr. 3790 Budapest).

♀. - Length 3.7-4.4 mm. Black, a narrow streak on mandible basally, labrum, excepting the pale brownish base, clypeus, excepting a longitudinal black streak medially, supraclypeal area, except the black anterior tentorial pit, inner eye margin below separated from the broad spot of ocular sinus slightly emarginated apically, a spot between antennal sockets, antennal joints 1-2 below, a narrow streak on outer eye margin above, a band on pronotum posteriorly connected with tubercle, hump, spot on tegula, on postscutellum and on posterior corners of propodeum, streaks on tergites 1-4 dilated at sides, tergite 6 largely, fore coxa below, middle and hind coxae apically, a spot on femora outside apically and on middle tibia basally, upper side of fore tibia, on fore and middle tarsal joints partly and tibial spurs, white. Flagellar joints 1(2) below, fore femur inside partly, tibia, tarsal joints largely, as well as middle tibia below and tarsal joints, partly brownish ferruginous; hind tibia darker ferruginous and blackish infuscated especially above. Wings slightly infuscated, veins brown, pterostigma yellowish brown. Body, especially lower face, propodeum and thorax ventrally with short silvery pubescence.

Head hardly broader than long (33:30), slightly broadened, then gradually narrowed behind eyes. Ocelli in an acute angle, POL:OOL = 5:7. Frons convex with microscopically fine and dense punctures, with some larger and scattered ones along the eye margin above ocular sinus. Temple hardly thickened, with a short and distinct orbital groove as long as nearly one-third the length of outer eye margin. Antenna rather short, flagellar joints as long as about one and half the length of their breadth. Pronotal disc short, thickened, in lateral view (cf. Fig. 19, *C. gaboni*), with some fine scattered punctures, lateral deepening with longitudinal wrinkles, lower apex short. Mesonotum mat, granulated with some scattered fine, mesepisternum with deeper punctures. Scutellum and postscutellum distinctly convex. Propodeum about two-thirds the length of its breadth (16: 24), flat except the hardly raised basal part, in lateral view, surface granulated with hardly discernible microscopically fine wrinkles, sulcus narrow and reaching the middle of segment. Metapleural suture not developed. Last abdominal segments similar to those of *C. polychloros* (Fig. 7). Claw of hind leg without a subapical tooth (cf. Fig. 1 of *C. bogdanovi*).

♂. - 4,7 mm. Similar to female, but differs in some details. Basis of mandible without a white spot, basal half of labrum and lower face black, nearly entirely, excepting a white spot on clypeus basally on supraclypeal area medially (Fig. 23), tergite 6 black, 7 with a large white spot, both spurs of hind tibia dark brown. Flagellar joint 1 black below, lower margin of clypeus laterally brownish ferruginous (Fig. 23).

Length and breadth proportion of head 31:36. POL:OOL = 5:8. Propodeum as long as about two-thirds the breadth (18:26), sulcus narrow (Fig. 24). Last abdominal tergite deeply excised apically. Sternite 9 deeply excised at apex and the corners rounded, lateral sides nearly parallel (Fig. 30). Paramere and penis valve of male genitalia: Figs 28-29. A row of tomentose hairs on hind metatarsus inside extends farther than one-third length of joint and the length of hairs nearly equals the breadth of the joint. Claw of hind leg without a subapical tooth.

The colour is not uniform in this species. The black spot below antennae larger on both paratypes (♀), as well as the longitudinal black line in the middle and the minute spot in the tentorial pit partly extends also laterally. The yellow basal spot on mandible lacking in specimen from "Rodesia" (♀). In sculpture: metapleural suture hardly discernible in specimen from "Zimbabwe" (♀).

This species resembles to *C. (Bifidoceropales) seyrigi* WAHIS 1988 (9), it differs besides its not bifid claws and not rectangularly curved claw of hind legs chiefly by the developed orbital groove, etc.

**D i s t r i b u t i o n :** Republic of South Africa, Zimbabwe.

*Ceropales Priesnerius honorei* PRIESNER

*Ceropales honorei* PRIESNER 1955: 23, 25 ♀♂

(*Ceropales honorei*: PRIESNER 1960: 66 ♂)

(*Ceropales honorei*: PRIESNER 1966: 154)

(*Ceropales (Aceropales) honorei*: PRIESNER 1969: 115)

(*Priesnerius honorei*: MOCZAR 1978: 353, 355 ♀♂ Figs 20-22)

**S p e c i m e n s e x a m i n e d :** 3 ♀, 2 ♂. Type material: Egypt = Kerdasa ♀ lectotype (Wien) (Móczár 1978); Kafr Hakim, 1 ♀ paralectotype (Cairo), Six Tower Suez Road, 1 ♂ paralectotype (Budapest) (MOCZAR 1978). - Non paratypic material: Abou Roasch 4 Apr 1958, 1 ♂ W.J. Pulawski (Wien); Kerdasa 8 Apr 1983 K.M. Guichard, 1 ♀ (London).

**D i s t r i b u t i o n :** Egypt (PRIESNER 1955).

*Ceropales (Priesnerius) kongoensis* sp.n.

**S p e c i m e n s e x a m i n e d :** 6 ♀, 5 ♂. Type material: Senegal = "Senegal Parc nat. bas. Casamance 28. IV-8.V.81 Mal.trap", "Wahis", "Holotypus *Cerop. (Priesnerius) kongoensis* Mócz. ♀ Móczár 1987" ♀ holotype (Coll. Wahis). - Paratypes: the same labels except the date, with "8-14.IX.81" 1 ♂ (Hym.Typ.No. 3791 Budapest). - Upper Volta = "Haute Volta: Bobo-Dioulasso X.1982, P.M., 400 m M. Delvaux & A. Pauly", "Wahis" 1 ♀ (Hym.Typ.No. 3792 Budapest). - Ghana = "Ghana: Kumasi Kwadaso III 1977 CIBC Scheibelr etc." 1 ♀ (Hym.Typ.No. 3793 Budapest). - Togo = "Togo: Sokodé XII. 1982 PM A. Pauly réc." 1 ♂ (Coll. Wahis). - Zaire = "Congo Belge, P.N.G. Miss H. de Saeger II/f, 28.XII.1950 Réc. J. Verschuren 1018", "R. Wahis dt. 77 *Ceropales* ♀ sp. 2" 1 ♀ (Coll. Wahis), the same first label except "II/f ... 1018" but with "I/a/3, 7.II.1950 Réc. De Saeger, 200", "R. Wahis dt 77 *Ceropales* ♂ sp.2" 1 ♂ (Coll. Wahis); "Coll.Mus.Congo Rutshuru 15.V.36 121 L. Lippens" 1 ♂ (Tervuren); Musée du Congo Katanga: Kansenia 15.IX.-15.X.1930 G.F. de Witte" 1 ♀ (Tervuren). - Zimbabwe = "Zimbabwe Nr Harare VII.82" 1 ♂ (allotype) and the same label excepting date, but with "Chishawasha VIII.82 A. Watsham" 1 ♀ (London).

♀. - Length 4.1-5 mm. Black, labrum excepting a paler darker basal spot, clypeus, excepting a longitudinal black streak, supraclypeal area, inner eye margin including ocular sinus, a narrow streak on outer eye margin above, antennal joints 1-2 below, a spot between antennal sockets, a narrow interrupted line on pronotum posteriorly separated from the spot of tubercle, hump, a small spot on tegula, on postscutellum, on lateral corners of propodeum, posterior corners on mesepisternum, narrow lateral streaks on tergites 1-3 dilated at the sides, a large spot on tergite 1 and on fore coxa below, narrow streaks on middle and hind coxae apically, sternal lobe, a spot on femora and on middle tibia outside apically, spurs except partly the longer spur of hind tibia, white. Lower side of flagellum brownish ferruginous. Last abdominal segments partly and inner sides of fore femur and tibia, as well as fore and middle tarsal joints largely brownish. Wings pale brownish infuscated, posterior margin of fore wing darker, veins and pterostigma brown. Body, especially lower face, propodeum and thorax ventrally with short silvery pubescence.

Head slightly broader than long (36:31) and gradually narrowed behind eyes. Ocelli in an acute angle, POL:OOL = 3:8. Frons convex, with a shallow and narrow line above antennae, surface granulate, slightly shining with some punctures along the eye margin above ocular sinus. Orbital groove represented by a shining line only above mandible. Antenna rather long, nearly as long as head and thorax together, flagellar joints nearly twice as long as its breadth. Pronotal disc flat, only with some fine punctures, lateral groove with longitudinal wrinkles, lower corner elongated, sharply pointed and sometimes bent down nearly to the half of the fore coxa. Mesonotum granulated with scattered fine punctures and with a medial, nearly unpunctured, slightly raised longitudinal area. Scutellum and postscutellum conspicuously flat. Propodeum remarkably elongated, nearly as long as the broadest diameter medially (23:25), medial sulcus triangular basally, suddenly narrowed apically and continued in a very narrow furrow to the middle of segment, basal part moderately convex and flat in declivous part posteriorly, in lateral view, surface granulated, mat. Mesopleural suture distinct, shallow. Mesepisternum with fine and scattered punctures. Last abdominal segments compressed laterally, lower margin straight, apex similar to that of *C. polychloros* (Fig.7). Hind claw with a small subapical tooth.

♂. - Length 4,1-5 mm. Similar to female, but allotype differs as follows.

Labrum entirely white, the narrow line of pronotum continuous although narrowed medially, also tergite 4 with lateral streak, 6 black and 7 largely white, both spurs of hind legs brown. Posterior margin also of hind wing darker infuscated. Length and breadth of propodeum = 20:23. Claw of hind legs without a subapical tooth. Abdominal sternite 9 raised longitudinally like a roof, broadly truncate apically with curved lateral margins (Fig. 33). Paramere and penis valve of genitalia: Figs 31-32. The row of tomentose hairs on hind leg extends only one-third over the length of metatarsus.

Variation in colour: clypeus exceptionally, labrum often entirely white (♀), the longitudinal black spot on clypeus broader and extends also over the basal margin (♀, often in ♂); white band on posterior margin of pronotum often interrupted (♂) or exceptionally (♀) black; middle coxa rarely (♀), tergite 4 (♀) or 5 (♂) also with minute spot; hind spurs sometimes entirely white (♀) or basally brown (♂).

This species similar to *C. angolaensis* MOCZAR 1988, to *C. ligaea* BINGHAM 1903 and to *C. gambiae* (*Ceropales* s.str. *helvetica*-group), it differs from them besides the hardly curved hind claws, by the not thickened outer orbit, the unraised scutellum, pronotal disc and postscutellum (♀♂), the pronotal tubercle not swollen and not protruding although the diameter of thorax here broader than across tegulae, by the not deeply punctured frons, etc.

**D i s t r i b u t i o n :** Senegal, Upper Volta, Ghana, Togo, Zaire and Zimbabwe.

*Ceropales Priesnerius nigra* RADOSZKOWSKI

*Ceropales nigra* RADOSZKOWSKI 1877: 14 ♀ Tab. VI. Fig. 10 (♂?)

(*Ceropales nigra*: FOX 1892: 62)

(*Ceropales nigra*: DALLA TORRE 1895: 91)

(*Ceropales niger*: DALLA TORRE 1897: 344)

(*Ceropales maculata* var. (an subsp.?) *nigra*: GUSSAKOVSKIJ 1931: 7, 22)

(*Priesnerius niger*: MOCZAR 1978: 353 ♀, ♂ nov. Pl.I. Figs 3-8)

**S p e c i m e n s e x a m i n e d :** 1 ♀, 1 ♂. Non paratypic material: China = Gukur Alask. dolina 15 Jul 1933, 1 ♀ (Budapest). - Tadzhik SSR = per Anzob, Gissar 31 Jul 1937 Gussakovskij, 1 ♂ (Budapest).

**D i s t r i b u t i o n :** Russian SSR (RADOSZKOWSKI 1877). Uzbekskaja

USSR (Gussakovskij 1931), Turkmen, Tadjik and Kazakh SSR (MOCZAR 1978).

*Ceropales (Priesnerius) opacior* PRIESNER

*Ceropales opacior* PRIESNER 1955: 22, 23 ♀

(*Ceropales opacior*: PRIESNER 1966: 152 ♀)

(*Priesnerius opacior*: MOCZAR 1978: 352, 354)

(*Priesnerius opacior*: MOCZAR 1979: 343 Figs 1-6 ♀)

**S p e c i m e n e x a m i n e d :** 1 ♀. Type material: Egypt: Gebel Asfar, ♀ holotype (Washington) (MOCZAR 1979).

This species stands near to *C. deserticola*.

**D i s t r i b u t i o n :** Egypt (PRIESNER 1955).

*Ceropales (Priesnerius) polychloros* GUSSAKOVSKIJ

*Ceropales poychloros* GUSSAKOVSKIJ 1931: 3 ♀

(*Ceropales (Aceropales) polychloros*: MOCZAR 1977: 253 ♀, ♂ nov. Taf.I. Fig. 5, Taf. II. Fig. 1)

(*Priesnerius polychloros*: MOCZAR 1978: 352, 354 ♀ ♂ Figs 15-16)

(*Priesnerius polychloros*: MOCZAR 1979: 343)

**S p e c i m e n s e x a m i n e d :** 3 ♀, 1 ♂. Type material: China: Danhe, Sachzhou, Gashunskoe Gobi, ♀ holotype (Leningrad) (MOCZAR 1978). - Non paratypic material: Turkmen SSR = Ashabad 13 Jun 1924 1 ♀ and Mongolia = Bajanchongor aimak 1 ♀, 1 ♂ (Budapest) (MOCZAR 1977).

**D i s t r i b u t i o n :** China (GUSSAKOVSKIJ 1931). Mongolia (MOCZAR 1977): Turkmen, Kazakh SSR (MOCZAR 1978).

*Ceropales (Priesnerius) saegeri* sp.n.

**S p e c i e s e x a m i n e d :** 3 ♀, 1 ♂. Type material: Zaire = "Congo Belge, P.N.G. Miss H. De Saeger II/gd/4, 8.V.1952 H. De Saeger 3449", "R. Wahis dt. 77 *Ceropales* ♀ sp. 2", "Holotypus *Cerop. (Priesnerius) saegeri* Móczár ♀ det. Móczár 1987" ♀ holotype (Coll. Wahis). - Paratypes: with the same labels excepting "II/gd/4", the date and "3449", but with "II/fd/3 7.V.1951 Réc." and "1701" 1 ♀ (Hym.Typ.No. 3794 Budapest), as well as with "II/gd/7, 20.IX.1951 Réc.H. de Saeger 2448", 1 ♀ (Tervuren). further the same first label of the holotype excepting the date and No. but with "27.XII.1951 Réc" and "2944" 1 ♂ (allotype) (Tervuren).

♀. - Length 4.4-4.8 mm. Black, labrum and clypeus entirely supraclypeal area, inner eye margin including ocular sinus with two pointed apex apically, a narrow streak on outer eye margin above, antennal joints 1-2 below, a spot between antennal sockets, a narrow and hardly interrupted line on pronotum posteriorly separated from spot of tubercle, a minute spot on hump, on tegula, on postscutellum, on lateral corners of propodeum, on posterior corners of mesepisternum, narrow lateral streaks on tergites 1-3 hardly dilated at sides, a larger spot on tergite 6 and on fore coxa below, narrow streaks on middle and hind coxae apically and on middle tibia outside basally, spurs excepting partly of the longer brown spur of hind tibia, white. Lower side of flagellar joint 1, last abdominal segments laterally, inner side of fore femur and tibia yellowish brown, fore and middle tarsal joints largely white with brownish ring apically. Fore wing slightly infuscated with darker posterior margin, veins brown, pterostigma yellowish brown. Body partly with short silvery pubescence.

Head hardly broader than long (29: 26), narrowing behind eyes. Ocelli in an acute angle, POL:OOL = 3:8. Frons convex, surface granulate, with some punctures along the upper eye margin. Orbital groove represented by a shining line above mandible. Antenna rather long, flagellar joints nearly twice as long as its breadth. Disc of pronotum flat, lateral groove with some longitudinal wrinkles, lower corner short, not elongated laterally and hardly reaching beyond the basis of fore coxa. Mesonotum granulated with scattered fine punctures. Scutellum remarkably convex and raised distinctly together with postscutellum above the level of thorax (Fig. 20), in lateral view. Length of propodeum three-fourths of its breadth (18:24), medial sulcus triangular basally and continued in a very narrow furrow to the middle of segment, propodeum shortly hardly convex basally and flat over its entire length, in lateral view, surface mat, granulated. Metapleural suture distinct, shallow. Mesepisternum with fine, scattered punctures. Last abdominal segment compressed laterally, lower margin straight, only slightly convex basally (cf. Fig. 7). Claw of hind leg with subapical tooth.

♂. - Length 4.4 mm. Similar to female, but differs from holotype as follows. Pronotal disc entirely black, only tubercle and hump with a minute white spot. White colour of body reduced. Tergites 5-6 black, 7 with a small white spot medially. The row of tomentose hairs of hind metatarsus ending almost at the middle of joint.

Length of propodeum four-fifths of its breadth (16:20). Also claw of hind leg with subapical tooth. Sternite 9 broadly truncate and deeply excised (Fig. 34) apically with angular corners and with broadly emarginate lateral margins. Penis valve and paramere of genitalia (Figs 35-36) remarkably differ from those of the other species.

Variation in colour: pronotal band only narrowed medially (1 ♀) or disc entirely black; inner spur of hind tibia white, not brown (1 ♀).

D i s t r i b u t i o n : Zaire.

*Ceropales (Priesnerius) senegalensis senegalensis* spec.nov.

S p e c i m e n s e x a m i n e d : 3 ♀, 4 ♂. Type material: Cameroun = "Cameroun", "Holotypus *Cerop. (Priesnerius) senegalensis* M. ♀ det. Móczár 1987" ♀ holotype (London). - Paratypes: "Cameroun" 1 ♀ (Hym.Typ.No. 3795 Budapest). - Senegal = "Senegal Parc nat.bas Casamance 21-28.III.81 Mal.trap", "Wahis" 1 ♂ (Coll. Wahis); with the same labels excepting date, but with "15-20.III.81" 1 ♂ (Hym.Typ.No. 3796 Budapest); or with "17-27.IV.81" 1 ♂ (Coll. Wahis); and with "21-31.V.81" 1 ♂ (allotype) (Coll. Wahis). - Upper Volta = "U V Bobo Dioulasso La Guingette 27-30.III.1984 M. Matthews" 1 ♀ (London).

♀. - Length 4,1-5,4 mm. Black, mandible, labrum, clypeus, supraclypeal area, inner and outer eye margins, a spot between antennal sockets, antennal joints 1-2 below, posterior margin of pronotum with tubercle, hump, a narrow streak on lower pointed apex of pronotum ventrally, tegula basally, a spot on postscutellum, on posterior corner of propodeum and mesepisternum, lateral streaks on tergites 1-4 dilated at sides and 6 nearly entirely, ventral side of fore coxa largely, a small spot on sternal lobe and on middle coxa basally, apical end of middle and hind coxae, a spot on femora outside apically and on middle tibia basally and apically, fore tibia in front, fore and middle tarsal joints partly, all tibial spurs, white. Flagellum below yellowish brown, joints 4-10 partly darker, inner side of fore femur, fore and middle tibiae largely brownish yellow. Rest of femora dark brownish, especially the hind femur and tibia dark brownish ferruginous below and blackish infuscated above, similarly to the hind tarsal joints. Wings hyaline, fore wing hardly infuscated apically. Veins brown, pterostigma yellowish brown. Body, especially lower face, propodeum and ventral side of thorax with short silvery pubescence.

Head distinctly broader than long (40:36), gradually narrowed behind eyes.



Ocelli in an acute angle, POL:OOL = 4:9. Frons distinctly obtuse angularly bent below ocelli and separated by a feeble ridge into a smaller area including the fore ocellus and a larger flat area below; surface hardly shining, with distinct scattered, here and there fine punctures, frontal sulcus present as a shining line. Temple not thickened, but with a distinct orbital groove, about one-third the length of outer eye margin. Antenna rather short, flagellar joints as long as about one and a half of their breadth. Pronotal disc short, slightly thickened, in lateral view, with some fine and scattered punctures, lateral deepening with some distinct longitudinal wrinkles. Mesonotum with fine, scattered, mesepisternum with slightly deeper punctures. Scutellum convex and conspicuously raised above the level of thorax together with postscutellum. Propodeum flat over its entire length, hardly longer than two-thirds of its breadth, surface with microscopically fine wrinkles transversely, sulcus slender, not reaching the middle of segment. Metapleural suture not developed. Last abdominal segments pointed apically, lower margin slightly curved basally. Claws of hind legs without a subapical tooth.

♂. - Length 3,4 mm. Similar to female, it differs by some details. Mandible, basal clypeal margin below eye, supraclypeal area beginning at anterior tentorial pit outward, lower half of outer eye margin, lower pointed apex of pronotum ventrally, mesepisternum and tergite 6 entirely black, tergite 7 largely white. Middle coxa basally without a white spot. Frons medially angularly bent below fore ocellus, also punctures being sparse or exceptionally stronger (♂). Breadth and length of head = 30:27. POL:OOL = 3:6. Flagellar joints slightly longer than their breadth. Pronotal disc slightly thickened. Length and breadth of propodeum = 15:20. Tergite 7 deeply excised apically. Sternite 9 slightly raised longitudinally in the middle, rounded and excised apically (Fig. 37), lateral margins hardly divergent with a tuft of hairs basally. Penis valve and paramere of male genitalia: Figs 38-39. Claws of hind leg without a tooth.

Some variation: Exceptionally mandible largely black and frons only hardly punctures (Upper Volta, 1 ♀).

This species is related to *C. gaboni* sp.n., but differs from it by a distinct orbital groove, not convex and punctured frons, etc. It also resembles *Ceropales* (s.str.) *kriechbaumeri* MAGRETTI 1884, but differs chiefly by the not strongly curved hind claws the punctures of mesonotum and mesepisternum much finer (♀♂), shining frons without rather deep and scattered

punctures (♂), sternite 9 and male genitalia (Figs 37-39), by colour, etc.

**D i s t r i b u t i o n :** Senegal, Upper Volta and Cameroun.

*Ceropales (Priesnerius) senegalensis mbouri* ssp.n.

**S p e c i m e n s e x a m i n e d :** 2 ♂. Type material: Senegal = "Senegal Mbour 14-24.4.81", "Holotypus *C. (Pr.) senegalensis mbouri* Móczâr ♂ det. Móczâr 1987" ♂ holotype (Coll. Wahis). - Non paratypic material: Senegal nr Koumpentoum Dec 1975 G. Couturier 1 ♂ (London).

♂. - Length 3,3 mm. Closely related to nominate species, differs as follows. Basal part of labrum brown, clypeus black, excepting a large quadrangular white spot basally and two narrow white streaks at the corners, lower margin dark ferruginous. Supraclypeal area white nearly entirely, only two narrow black streaks between anterior tentorial pit and the triangular spot below antennae. Scutellum with a narrow white streak longitudinally. Tergite 1 with a continuous band posteriorly, 5 with two minute lateral spots. The light spots on legs distinctly smaller. POL: OOL = 3:5. Length and breadth of propodeum = 11:16. Propodeal sulcus remarkably narrow basally.

An other male specimen with the same genitalia as the nominate species differs from it in colour: labrum, clypeus, supraclypeal area entirely white, except the black basal margins laterally (as in the nominate species, ♂); medial spot of scutellum larger; lateral streaks of tergites 3-5 narrow, partly hardly developed and longitudinal streak of middle metatarsus continuous, not interrupted medially.

1 ♀. - Unknown.

**D i s t r i b u t i o n :** Senegal.

*Ceropales (Priesnerius) subhelvetica* sp.n.

**S p e c i m e n s e x a m i n e d :** 9 ♀, 5 ♂. Type material: Israel = "Israel Herzliya 1.VIII.1981 A. Freidberg Malaise trap", "Holotypus *Cerop. (Priesnerius) subhelvetica* Mócz. ♀ det. Móczâr 1987" ♀ holotype (Tel Aviv). - Paratypes: the same labels as on holotype except the date, but with "20.VI.1981" 1 ♂ (Tel Aviv); with "21.VI.1981" 1 ♀ (Hym.Typ.No. 3797 Budapest); with "17.VII.1981" 1 ♂ (allotype) (Hym.Typ.Nr. 3798 Budapest); with "29.VII.1981" 1 ♀ (Tel Aviv); with "27.VI.1982 1 ♂ (Tel Aviv); with "11.VII.1982" 1 ♂ (Hym.Typ. No. 3799 Budapest); with 12.VII.1982 1 ♀

(Hym.Typ.No. 3800 Budapest); with "17.VII.1982" 1 ♀ (Tel Aviv) and with "18.VII.1982" 1 ♂ (Tel Aviv). - Upper Volta = "Upper Volta Banfora 23 - 26.III.1984 M. Matthews" 1 ♀ (London). - Senegal = "Senegal Kedougou 1 -7.VI.81 Mal.trap", "Wahis" 1 ♀ (Hym.Typ.No. 3801 Budapest); "Senegal Mbour 16 -30.VII.81 Mal. trap", 1 ♀ (Coll. Wahis); "Senegal nr Koumpentoum III.1976 G. Couturfer" 1 ♀ (Hym.Typ.No.3802 Budapest).

♀. - Length 4,5-6,5 mm. Mandible, except the ferruginous apex, labrum, clypeus, excepting two small blackish spots medially, supraclypeal area, inner eye margin including the ocular sinus often with two pointed apex, a spot between antennal sockets, on frons medially, on antennal joints 1-2 below, outer eye margin, hind margin, tubercle, hump and lower pointed apex of pronotum, tegula basally, lower angle of mesepisternum posteriorly, postscutellum, on posterior corners of propodeum, lateral streaks on tergites 1-4 slightly emarginated in front, tergite 6 largely, fore coxa below, a small spot on middle coxa basally, sternal lobe, middle and hind coxae broadly apically, a spot on fore and middle femora apically outside, upper side of fore tibia and metatarsus narrowly, a spot on middle tibia basally and tibial spurs, except the brownish infuscated hind inner one, white. Flagellar joints 1-2 below distinctly, the others partly, trochanters more extensively apically, femora, tibiae largely and fore tarsal joints, ferruginous. Upper side of tibiae slightly, middle and hind tarsal joints dark infuscated. Fore wings weakly infuscated apically, veins and pterostigma brown. Lateral side of tergites 1-2 brownish translucent. Body, especially propodeum, mesopleura, ventral side of thorax, as well as of coxae with short silvery pubescence.

Head distinctly broader than long (48:38) and narrowed behind eyes. Ocelli in an acute angle POL:OOL = 5:10. Frons sharply bent below fore ocellus, surface hardly shining with fine but below ocelli deeper and on vertex again with fine punctures, interspaces as long as the diameter of two punctures below ocelli. Temple narrow without orbital groove. Antenna rather long reaching the middle of propodeum, flagellar joints about on and a half time longer than its breadth. Pronotal disc short, slightly convex, in lateral view, with fine and scattered punctures, lateral side remarkably concave between tubercle and the elongate hump, with longitudinal wrinkles in the deepening. Middle of mesonotum raised longitudinally, punctures gradually becoming more dense posteriorly. Scutellum remarkably convex in lateral view and distinctly raised together with post-

scutellum above the level of thorax. Propodeum conspicuously flat, medial sulcus broad forming an equilateral triangle, with some transverse wrinkles (Fig. 17), surface of disc with microscopically fine wrinkles basally, rugulose around petiole and with deeper punctures along lateral margin, metapleural sulcus partly and slightly distinct. Mesepisternum deeply and below posteriorly more densely punctured. Sternal lobe pointed. Last segment compressed laterally, lower margin hardly convex basally and straight apically, in lateral view. Claws with subapical tooth, similar to Fig. 3 (*C. honorei*).

♂. - Length 5,2-5,8 mm. As in female, differs as follows. Black: mandible, labrum, clypeus excepting two oblique white lines basally, further a triangular spot below antennae, lower pointed apex of pronotum, lower angle of mesepisternum, sternal lobe, middle coxa, tergite 6; but tergite 7 largely white; white spots remarkably smaller on outer eye margin, on legs and absent on middle and hind femora apically; hind tibial spurs brownish black; labrum apically, lower margin of clypeus and hind coxa partly outside dark reddish translucent. Punctures of frons finer. POL:OOL = 4:8. Tergite 7 excised apically in the middle. The row of tomentose hairs of hind metatarsus very short extending shorter than apical third of joint, hairs about as long as one-fourth of the breadth of a joint. Sternite 9 raised like a roof longitudinally and deeply excised apically with concave lateral sides (Fig. 42), tip slightly bent upwards; penis valve and the pointed inner side of the right paramere of genitalia: Figs 43-44.

This species is rather variable in colour. Labrum sometimes with a blackish spot basally, the white spot on frons exceptionally lacking, scutellum rarely with a white spot, tergite 1 or rarely sternites laterally partly brownish translucent, hind spurs rarely entirely white. Metapleural sulcus rarely not perceptible.

This species is similar to *Ceropales* (s.str.) *helvetica* TOURNIER 1889 (several specimens were collected together in the same locality: Herzliyya, at 12 and 11 Jul 1982 etc. with this species), but differs from it by the not strongly rectangularly bent hind claw, sternite 9 not sharply pointed laterally (Fig. 42), cf. of *C. helvetica*: Fig. 46 (MOCZAR 1988), the penis valve and paramere of genitalia (Figs 43-44), cf. of *C. helvetica*: Fig. 47 (l.c.), by the considerably finer and shallower, though relatively still deep and dense punctures of frons, mesonotum and mesepisternum (more so on ♀, less so on ♂), by colour, etc.

**D i s t r i b u t i o n :** Israel, Upper Volta, Senegal.

*Ceropales (Priesnerius) tihensis* PRIESNER

*Ceropales tihensis* PRIESNER 1955: 23, 26 ♀

(*Ceropales tihensis*: PRIESNER 1966: 154

(*Ceropales (Aceropales) tihensis*: PRIESNER 1969: 115)

(*Priesnerius tihensis*: MOCZAR 1978: 353, 355 ♀ Figs 17-19)

**S p e c i m e n e x a m i n e d :** 1 ♀. Type material: Egypt = Wadi El Tih, ♀ holotype (Wien) (MOCZAR 1978)

**D i s t r i b u t i o n :** Egypt (PRIESNER 1955).

*Ceropales (Priesnerius) tobiassi* (MÖCZAR)

*Priesnerius tobiassi* MÖCZAR 1978: 353, 356 Figs 9-12 ♀

**S p e c i m e n s e x a m i n e d :** 2 ♀. Type material: China = Sinkiang, ♀ holotype (Leningrad) (MOCZAR 1978). - Non paratypic material: Without locality label, "K.F. Morawitza" (no further data), probably also from China, 1 ♀ (Budapest).

Some addition to the description: the small streaks on outer eye margin developed only above; malar space brownish. Length 6,2 mm.

**D i s t r i b u t i o n :** China (MOCZAR 1978).

*Ceropales (Priesnerius) yemeni* sp.n.

**S p e c i m e n s e x a m i n e d :** 4 ♀, 3 ♂. Type material: Yemen = "Yemen, El'Asr, about 3 miles W. of San'a, ca. 8100 ft. 27 28 II.1938", "B.M.Exp. to S.W. Arabia H. Scott & E.B. Britton. B.M. 1938-246.", "Holotypus *Cerop. (Priesnerius) yemeni* Möczâr ♀ det. Möczâr 1987", ♀ holotype (London). - Paratypes: the same two labels, excepting "8100 ft" and date, but with "8000 ft 14.II.1938" 1 ♂ (allotype) (London); "Yemen: Hada, about 4 miles A.W. of San'a, ca. 8000 ft 14.I.1938" and the second label of holotype, 1 ♂ (Hym.Typ.No. 3803 Budapest). - Saudi Arabia = "Saudi Arabia Jeddah Area W. Fatima 9/2/83 K.M.G." 1 ♀ (Hym.Typ.No. 3804 Budapest). - Israel = "Israel: Yogueamm 1.8.70 leg. Bytinski Salz", "*Ceropales sabulicola* Priesner ♀ H. Wolf det 1971", 1 ♀ (Tel Aviv); "Ein Zik 8.VIII.1977 A. Freidberg", 1 ♂ (Tel Aviv). - Sudan = "Coll<sup>e</sup> P. Magretti Kassala 9.II.1883", "*Ceropales krieckbaumeri* Magr.", 1 ♀ (Genova).

♀. - Length 5,3-5,8 mm Black, mandible, lower margin of labrum, clypeus,

excepting a longitudinal T-shaped black mark reaching the anterior tentorial pit, supraclypeal area, excepting two black and large triangular spots below antenna, connecting the spot on clypeus, inner eye margin interrupted at antenna and with a sharply pointed apex above, antennal joints 1-2 below, a spot between antennal sockets, a continuous narrow streak on outer eye margin, a band on pronotum posteriorly including tubercle, hump, narrow streak on lower pointed apex of pronotum ventrally, tegula basally, postscutellum, on posterior corner of propodeum, a narrowly interrupted band on tergite 1 posteriorly, and broadly interrupted bands on tergites 2-4, a large spot on 6 and on fore coxa ventrally, a small spot on sternal lobe, middle and hind coxae apically, on femora outside apically, on middle tibia basally and apically, a short line on fore tibia in front, fore and middle tarsal joints partly, tibial spurs, excepting the brownish longer spur of hind tibia below, yellowish white. Labrum basally, flagellar joint 1 below and abdomen laterally partly brownish. Inner side of fore femur partly, fore and middle tibia largely brownish ferruginous, hind tibia darker. Fore wings hardly infuscated, veins brown, pterostigma yellowish brown. Lower face, propodeum and ventral side of thorax with short silvery pubescence.

Head distinctly broader than long (39:34), narrowed behind eyes. Ocelli in an acute angle, POL:OOL = 5:7. Frons obtuse angularly bent, below fore ocellus with deep, here and there dense punctures, frontal sulcus shallow. Orbital groove present only as a shining line. Antenna short, flagellar joints as long as about one and a half of their breadth. Pronotal disc distinctly thickened in lateral view, with scattered and distinct punctures, lateral deepening with some longitudinal wrinkles. Mesonotum with scattered deeper, mesepisternum on disc with coarser punctures. Scutellum convex and raised with postscutellum above the level of notum. Propodeum flat over its entire length, as long as about three-fourths of its breadth (21:27), surface with microscopically fine wrinkles transversely, sulcus slender, not reaching the middle of the segment. Metapleural suture not distinct. Last abdominal segments more sharply pointed apically, lower margin straight, in lateral view. Claw of hind leg with a distinct subapical tooth.

♂. - Length 4,1 mm. Similar to female, but it differs in some details. Mandible, basal half of labrum, the entire clypeus, excepting the yellowish ferruginous lower and lateral margin below eye, supraclypeal area, except

the inner eye margin, outer eye margin on its two-thirds length below, tergite 6, two-thirds part basally of fore coxa also below, black. Tergite 7 with a large white spot. Punctures of frons somewhat shallower. POL:OOL = 4:6. Orbital groove deeper and broader and as long as about one-third the length of outer orbit. Length and breadth of propodeum = 16:22. Tergite 7 rather deeply excised apically. Claws of hind legs with a subapical tooth. Sternite 9 slightly raised longitudinally, rounded and excised apically (Fig. 45) with convergent lateral sides. Penis valve and paramere: Figs 46-47.

The paratypes from Israel and from Sudan are richly coloured with light spots namely: labrum ferruginous only basally, not brownish, anterior tentorial pit separated from the longitudinal clypeal streak, the light line on inner eye margin and tergite 1 continuous (not interrupted), lateral streaks on tergites broader, and femora, tibiae partly more brownish ferruginous, not black; the yellow spot on middle tibia larger on the specimens from Israel and smaller on that from Sudan. In the other paratype from Saudi Arabia the black colouring extends as follows: mandible with a black spot basally, clypeus and supraclypeal area largely black medially, yellow line of outer eye margin broadly interrupted below, femora largely black, hardly blackish ferruginous and the light colour on body white (not yellowish white). The one specimen from Israel (collected in 1877!) differs slightly from the described allotype (collected 1938) by the more vivid yellowish white colour and by tergite 1 with a continuous apical band.

It resembles *C. karoensis* ARNOLD 1937, with the brownish black lower face, but differs from it by the hind claw, which is not strongly rectangularly curved (♀♂), the shorter orbital groove being not half as long as outer eye margin (♂), different sternite 9 and genitalia (Figs 45-47), posterior margin of pronotum not flat, but moderately thickened (♀), by metapleural suture undeveloped (♀♂), etc.

This species resembles also *C. helvetica* TOURNIER 1889, but differs from it by the remarkably scattered punctures of frons and thorax (♀), the deeper and broader orbital groove (♂), by the not ferruginous legs, etc.

*C. yemeni* sp.n. is similar to *C. juncoi* GINER 1945, but differs from it by the rectangularly curved hind claws, propodeal sulcus broader basally

and longer medially, the not yellowish white lower face, by the not largely ferruginous legs, etc.

**D i s t r i b u t i o n :** Yemen, Saudi Arabia, Israel.

### **Zusammenfassung**

Auf der Basis von 91 Exemplaren der Untergattung *Ceropales* (*Priesnerius*) werden 9 Taxa revidiert und 11 als neu beschrieben: *Ceropales* (*Priesnerius*) *arnoldi* ♀♂, *C. gaboni* ♀, *C. gessi* ♀, *C. grahamstowni* ♀♂, *C. kongoensis* ♀♂, *C. saegeri* ♀♂, *C. senegalensis senegalensis* ♀♂, *C. senegalensis mbouri* ♂ aus der äthiopischen Faunen-Region; *C. subhelvetica* ♀♂ aus Senegal, Obervolta, Israel; *C. yemeni* ♀♂ aus Jemen und *C. dubaica* ♂ aus den Vereinigten Arabischen Emiraten. Die ursprüngliche Gruppierung der Untergattungen *Aceropales* = *Priesnerius*, *Hemiceropales* etc. wurde wieder hergestellt. Ein Schlüssel für die nunmehr bekannten 20 Arten und Unterarten der Welt, Verbreitungs- und Variationsangaben zu den einzelnen Arten sowie 47 Figuren werden beigelegt.

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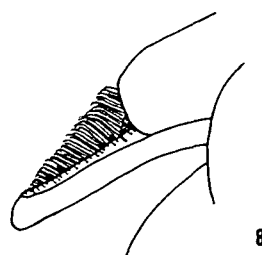
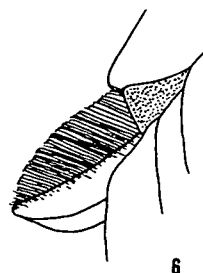
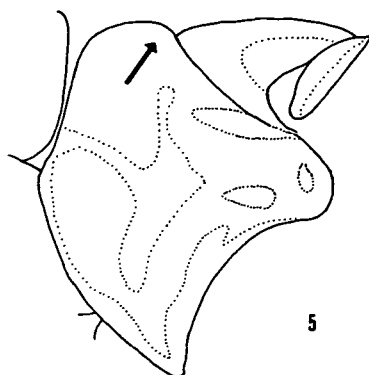
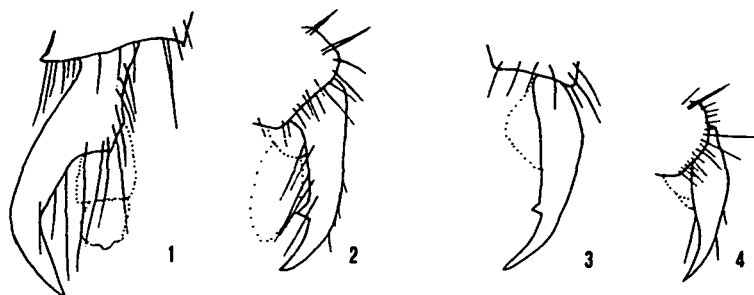


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Figs 1-4 Claw of hind leg: 1 = *Ceropales (Priesnerius) b. bogdanovi* ♂; 2 = *C. nigra* ♂; 3 = *C. hcnorei* ♂, and 4 = *C. tihensis* ♀.

Figs 5-8: *Ceropales deserticola*: 5 = pronotum and mesonotum partly, in lateral view, ♀; 6 = sternite 9 and last abdominal segments, ♂. - Fig. 7 = *C. polychloros* ♀ last abdominal segments.; 8 = *C. dubaica* ♂, sternite 9.

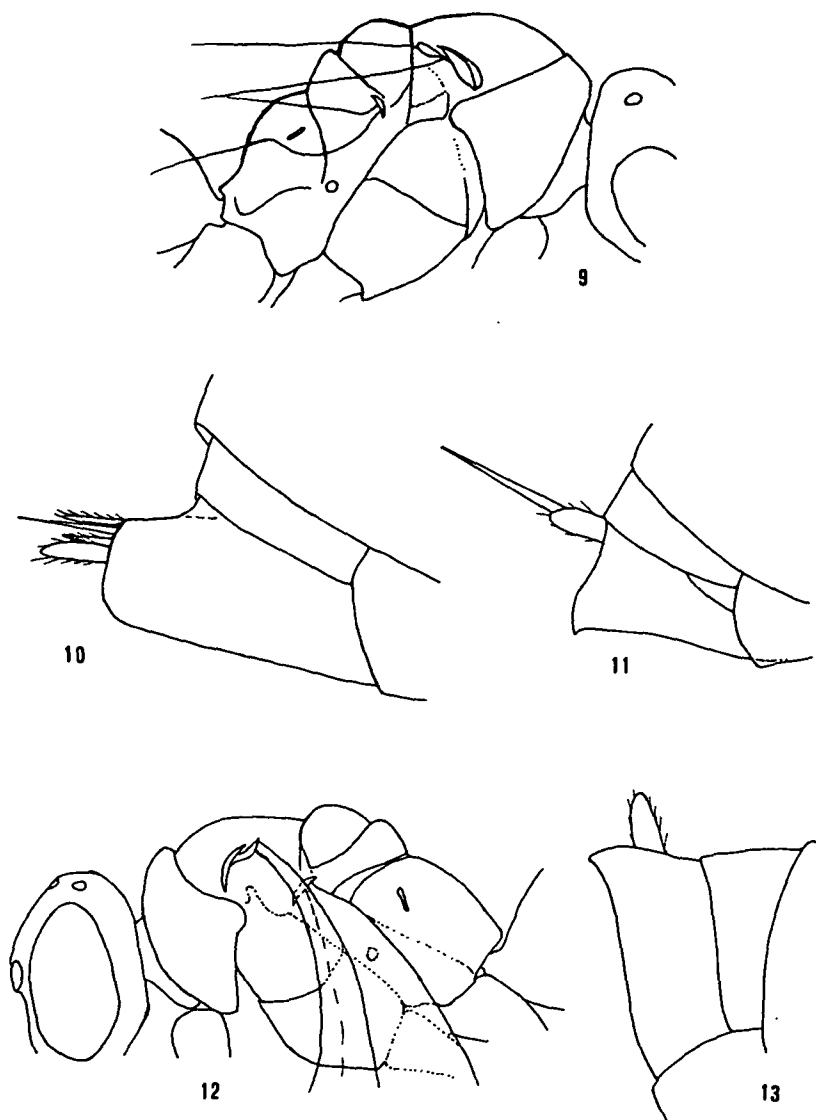
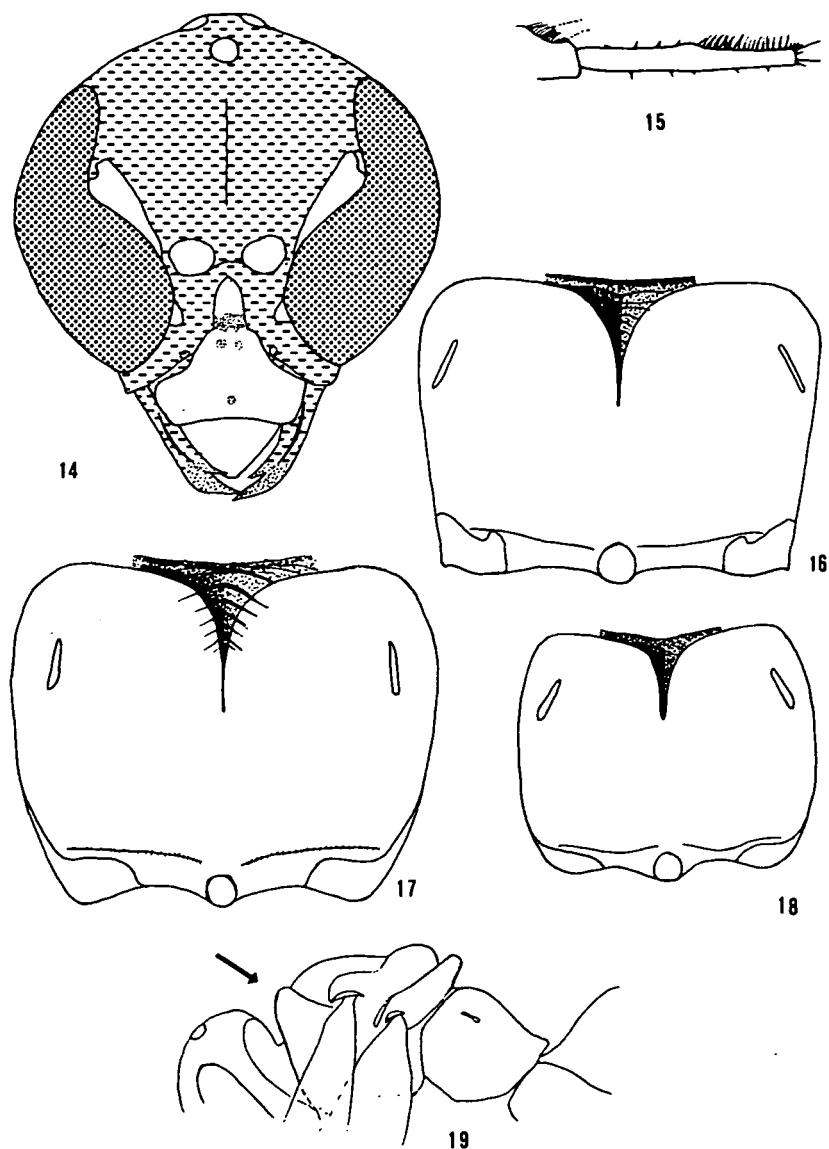


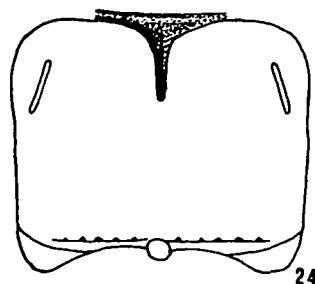
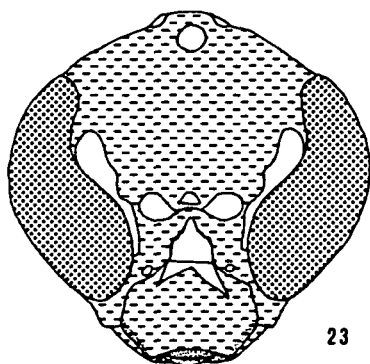
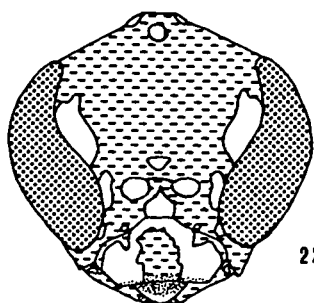
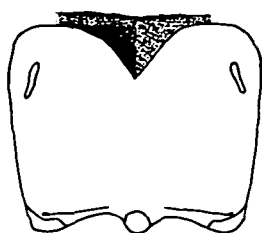
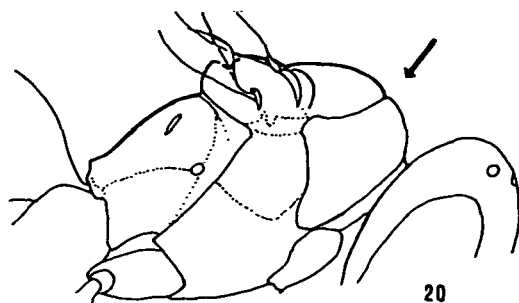
Fig 9: Thorax of *Ceropales nigra* ♂, in lateral view.

Figs 10-13: 10 = *Ceropales tobiassi* ♀, last abdominal segments. - Fig 11 = *C. tihensis* ♀, last abdominal segments. - Figs 12-13 *C. honorei* : 12 = head and thorax, ♂; 13 = last abdominal segments, ♀.

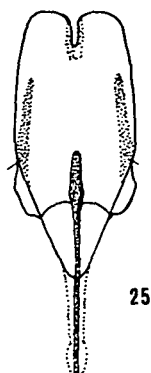


Figs 14-16 *Ceropales arnoldi*: 14 = head in front, ♀; 15 = hind metatarsus of ♂; 16 = propodeum of ♀.

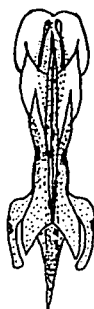
Figs 17-19: 17 = *Ceropales subhelvetica* ♀, propodeum. - Figs 18-19 *C. gaboni* ♀: 18 = propodeum; 19 = head and thorax partly, in lateral view.



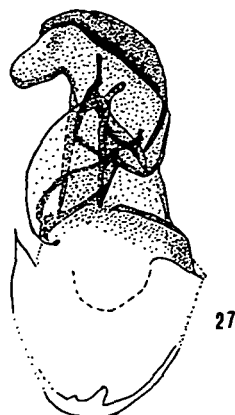
Figs 20-22: 20 = *Ceropales saegeri* ♀, thorax and head partly, in lateral view. - Figs 21-22 *C. gessi*: 21 = propodeum; 22 = head in front.  
Figs 23-24 *Ceropales grahamstowni* ♂: 23 = head in front; 24 = propodeum.



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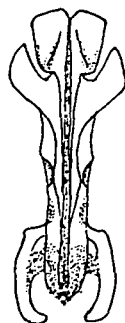
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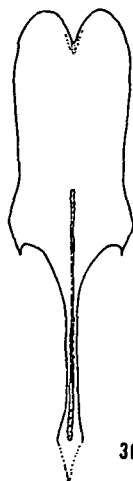
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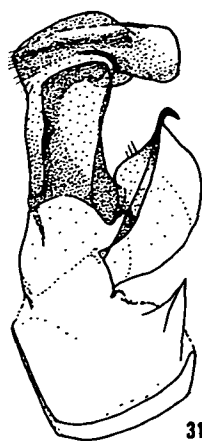
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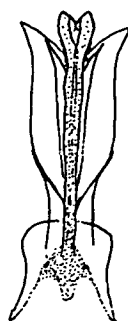
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Figs 25-27 *Ceropales arnoldi* ♂: 25 = sternite 9; 26 = penis valve; 27 = paramere, viewed from inside.

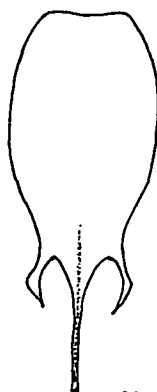
Figs 28-30 *Ceropales grahamstowni* ♂: 28 = paramere; 29 = penis valve; 30 = sternite 9.



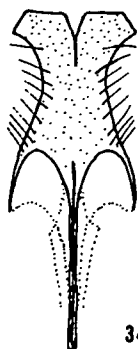
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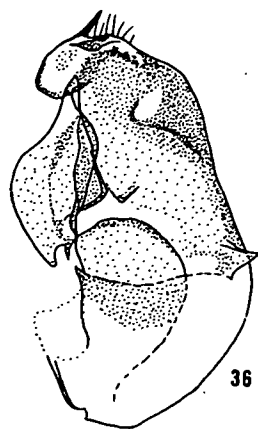
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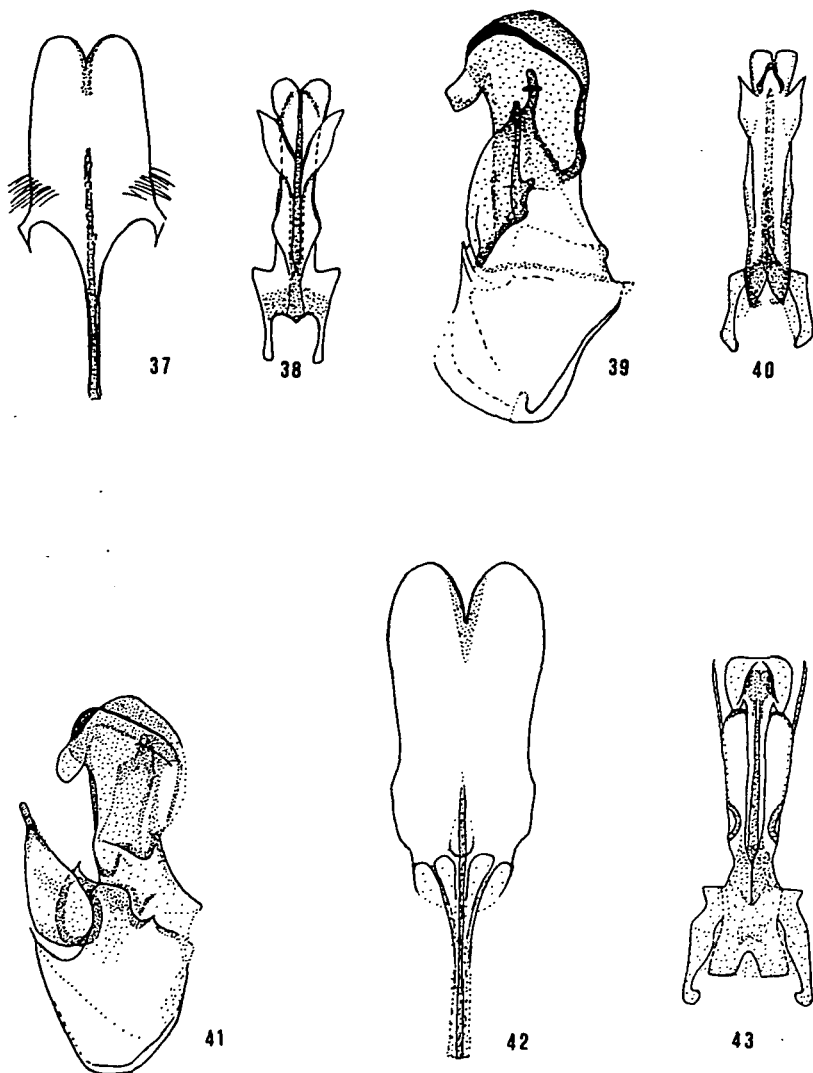


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Figs 31-33 *Ceropales kongoensis* ♂: 31 = paramere; 32 = penis valve; 33 = sternite 9.

Figs 34-36 *Ceropales saegeri* ♂: 34 = sternite 9; 35 = penis valve viewed somewhat from the side; 36 = paramere.





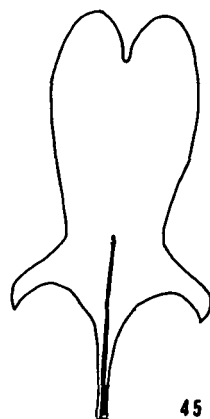
Figs 37-39 *Ceropales senegalensis senegalensis* ♂: 37 = sternite 9; 38 = penis valve; 39 = paramere.

Figs 40-41 *Ceropales senegalensis mbouri* ♂: 40 = penis valve; 41 = paramere.

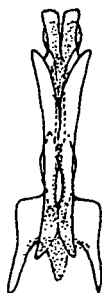
Figs 42-43 *Ceropales subhelvetica* ♂: 42 = sternite. 9; 43 = penis valve.



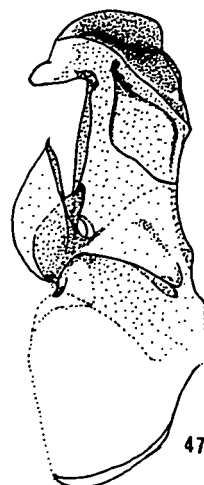
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Figs 44: *Ceropales subhelvetica* ♂, paramere.

Figs 45-47 *Ceropales yemeni* ♂: 45 = sternite 9; 46 = penis valve; 47 = paramere.

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