Smeringopina bineti (Millot, 1941)

Millot, J. 1941. Les araignées de l'Afrique occidentale Francaise. Sicariides et pholcides. Mémoires, Acad. Sci. Inst. France 64: 1-30.

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Smeringopus Bineti n. sp. (1)

(*fig.* 10 et 10 *bis*).

Céphalothorax plus large que long, à côtés arrondis, jaune testacé clair, enfumé sur les bords et dans la région médiane. Clypeus marqué de deux

(1) Dédié au physiologiste Léon Binet.

fortes bandes verticales brunes joignant les triades oculaires au bord inférieur. Sternum brun noirâtre ou noir. La couleur des pièces buccales varie du testacé olivâtre foncé au brun noir, suivant les sujets.

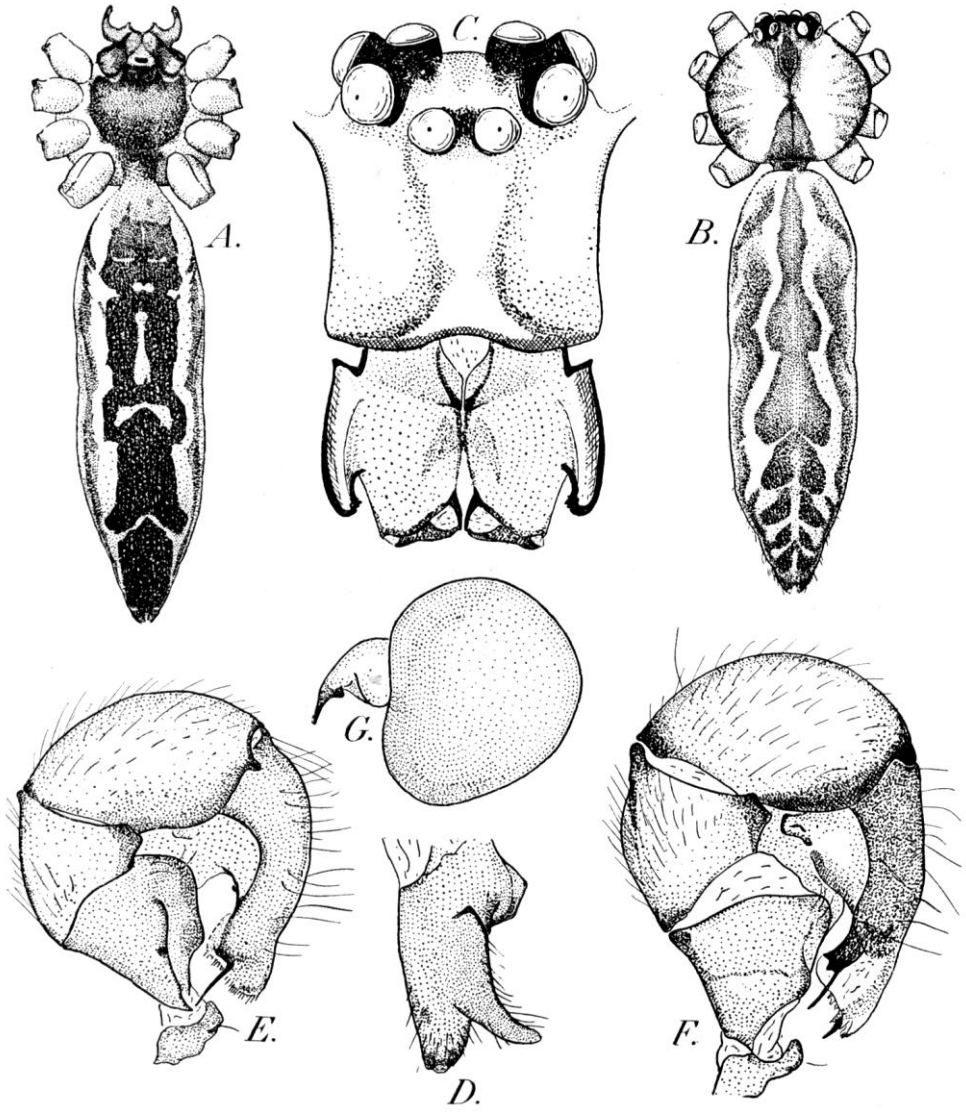

Fig. 10. — *Smeringopus Bineti* n. sp., ♂ : A, vue ventrale. B, vue dorsale. C, céphalothorax, vue antérieure. D, chélicère de profil. E, palpe, vue externe. F, palpe d'un autre spécimen. G, bulbe isolé montrant l'embolus.

Abdomen moins allongé que celui des deux espèces précédentes, un peu moins de quatre fois plus long que large chez les ♂. Il est orné : 1° sur le dos, d'une bande noire médio-longitudinale, présentant une série régulière

de dilatations; 2° sur les flancs, de traînées sinueuses de pigment; 3° sur la face ventrale, d'une très large bande longitudinale noire contenant plusieurs marques blanches, semblables à celles de *Smeringopus pulcher* (*fig.* 10 D).

Pattes testacé olivâtre clair. On remarque un manchon blanc, précédé d'un anneau enfumé, dans la partie terminale du fémur; un autre dans la partie terminale du tibia. Patelle et base du tibia enfumées.

♂. Bord antérieur du clypeus concave en son milieu. Chélicères caractéristiques présentant une carène latérale bordée de noir, terminée en haut par un angle aigu, en bas par une corne recourbée, fortement saillante en avant (*fig.* 10 D).

Palpe (*fig.* 10 E, F, G). Trochanter muni d'une apophyse antéro-externe recourbée, assez courte. Fémur trapu, très atténué à la base, très élargi au sommet. Tibia ovoïde, aussi long que la patelle et le fémur réunis. Apophyse externe du tarse légèrement courbe, de contours « mous », ne faisant jamais d'angle net : nous représentons deux variétés de courbure (E et F). Du côté externe, elle porte un aiguillon terminal dont le mode d'attache sur l'hypophyse est variable; du côté interne, un deuxième aiguillon noirâtre, plus petit et parfois difficile à voir.

Bulbe jaunâtre, en forme de sphère imparfaite; embolus lamelleux de face, mais formant de profil une pointe assez aiguë, presque bifide.

Pattes beaucoup moins longues que celles des *S. pulcher* et *S. guineensis*.

Longueur totale, $5^{mm},9$ (♂ de Dalaba); 5^{mm} (♂ de Tassacouré).

Pattes du ♂ de Dalaba.....	I.	IV.	III.
Fémur.....	13,5	9,5	7,2
Patelle + tibia	12,0	8,5	7,0
Protarse + tarse	27,0	15,0	11,5
Total	52,5	33,0	25,7

♀. Alors que les ♂ sont bien caractérisés et se distinguent de ceux des espèces voisines par des particularités parfaitement stables, les ♀ paraissent plus fluctuantes, bien que leur détermination ne puisse faire de doute. Les dessins blancs contenus dans la bande noire ventrale ne sont pas identiques chez toutes (*fig.* 10 *bis* A et B). La région génitale présente, parfois, de notables variations. Nous en figurons trois exemples.

Palpe en entier brun noirâtre foncé; le tarse est terminé par deux griffes accompagnées de quelques fortes soies.

Longueur totale, 6 à 7^{mm}.

Mensurations des pattes d'une ♀ de 6mm,7 (Tassacouré) :

	I.	>	II.	>	IV.	>	III.
Fémur.....	10,5		8,0		7,5		5,5
Patelle + tibia	12,0		8,0		7,8		5,8
Protarse + tarse	24,5		15,0		14,0		9,5
Total	47,0		31,0		29,3		20,8

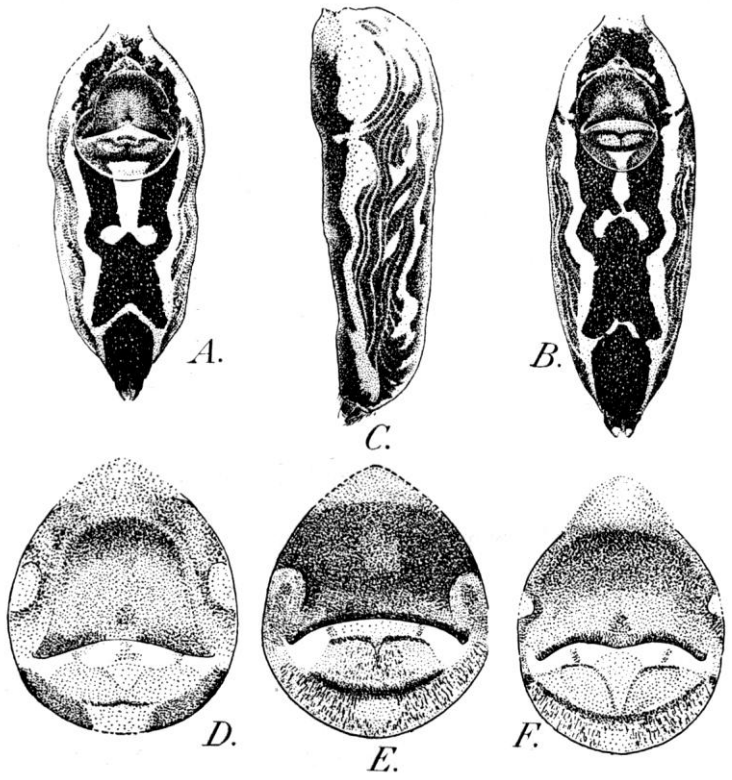

Fig. 10 *bis*. — *Smeringopus Bineti* n. sp., ♀ : A, abdomen, vue ventrale. B, *id.*, autre sujet. C, *id.*, vue latérale. D, E, F, différents aspects de la région génitale.

Smeringopus Bineti habite, avec prédilection, les grottes, mais parfois on le capture dans de simples cavités rocheuses. Il semble localisé dans la région du Fouta-Djallon.

Guinée française. — Grotte de Tassacouré : 1 ♂, 3 ♂ immatures, 2 ♂. Grotte de Tinka : 1 ♀. Dalaba : 1 ♂, 3 ♀. Kindia : 1 ♀.

Berland a donné, en 1920 (p. 20), une liste des *Smeringopus* africains. Il faut en retrancher *Smeringopus lineiventris* Simon, indiqué par erreur d'Afrique Occidentale; décrit d'Aden en 1890, il n'a, à notre connaissance, jamais été trouvé sur le continent noir. Il faut, par contre, ajouter plusieurs espèces décrites depuis 1920.

Huber, B. A. 1995. Copulatory mechanism in *Holocnemus pluchei* and *Pholcus opilionoides*, with notes on male cheliceral apophyses and stridulatory organs in Pholcidae (Araneae). Acta Zool. (Stockholm) 76(4): 291-300.

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It further indicates the necessity to place *Smeringopus pulcher*, *S. guineensis* and *S. bineti* (all: Millot, 1941) into the genus *Smeringopina* Kraus, 1957.

Huber, B. A. 2013. Revision and cladistic analysis of the Guineo-Congolian spider genus *Smeringopina* Kraus (Araneae, Pholcidae). Zootaxa 3713: 1-160.

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***Smeringopina bineti* (Millot, 1941)**
Figs. 2–3, 41–45, 54, 76–95

Smeringopus bineti Millot 1941: 24–27, figs. 10A–G, 10bis A–F.
Smeringopina bineti: Huber 1995: 299 (transfer to *Smeringopina*). Dimitrov, Astrin & Huber 2013 (DNA data).

Types. ♂ lectotype (designated herein) from Guinea, Dalaba [10°40.7'N, 12°15.7'W], and 1♂7♀ 5 juvs. paralectotypes from Guinea, Dalaba (3♀), Kindia [10°00.8'N, 12°48.6'W] (1♀), Grotte de Tinka [10°44.1'N, 12°16.3'W] (1♀) and Grotte de Tassacouré (locality not identified; 1♂2♀ 3 juvs), all collected by J. Millot in 1937, all together in one vial, original label: "Smeringopus bineti, Millot rec. et det., Afrique occidentale franc.", in MNHN (Ar 10490), examined.

Notes. Since the numbers of adult and juvenile specimens in the single vial agrees well with the total number of specimens studied by Millot (1941), I assume that all type specimens from all four localities were joined.

A lectotype is designated because specimens from Koumbaya and Grotte de Tassacouré differ slightly in their morphology (see below), as already noted by Millot (1941). The larger male (from Dalaba, illustrated in Millot's figure 10F) is chosen because the locality of the other male (Grotte de Tassacouré) could not be identified. The male lectotype is in bad condition (see below) but Millot's figure leaves no doubt that it is conspecific with new material collected at the type locality and at other places in Guinea.

Other material examined. GUINEA: *Moyenne-Guinée*: Dalaba (10°40.7'N, 12°15.7'W), along brook in forest, 920 m a.s.l., 21.xi.2008 (B.A. Huber), 4♂3♀ in ZFMK (Ar 10176); same data, 1♂4♀ 2 juvs. in pure ethanol, in ZFMK (Gui 108); same locality at 10°40.6'N, 12°16.0'W, 1150 m a.s.l., 21.xi.2008 (B.A. Huber), 1♂6♀ 2 juvs. in pure ethanol, in ZFMK (Gui 101); Dalaba, forest fragment at 10°41.5'N, 12°15.9'W, 1230 m a.s.l., 21.xi.2008 (B.A. Huber), 1♀ in pure ethanol, in ZFMK (Gui 116); near Dalaba, Pont de Dieu (10°41.1'N, 12°12.8'W), sheltered rock cavities, 1150 m a.s.l., 21.xi.2008 (B.A. Huber), 1♀ 7 juvs. in pure ethanol, in ZFMK (Gui 107). Near Maréla (10°09.9'N, 11°30.4'W), road cut, 420 m a.s.l., 26.xi.2008 (B.A. Huber), 3♂8♀ 1 juv. in ZFMK (Ar 10177); near Maréla (10°09.8'N, 11°17.1'W), 630 m a.s.l., 4.xii.2008 (B.A. Huber), 1♂ in ZFMK (Ar 10178); same data, 1♂2♀ 2 juvs. in pure ethanol, in ZFMK (Gui 89). SE Mamou (10°17.6'N, 11°56.5'W), forest along brook, 460 m a.s.l., 4.xii.2008 (B.A. Huber), 7♂11♀ 1 juv. (2 vials) in ZFMK (Ar 10179-80); same data, 2♂2♀ in pure ethanol, in ZFMK (Gui 88). Near Sêbori, in cave (10°46.6'N, 12°17.4'W), 1010 m a.s.l., 22.xi.2008 (B.A. Huber), 4♂15♀ (2 vials) in ZFMK (Ar 10181-82); same data, 3♂2♀ in pure ethanol, in ZFMK (Gui 99). Near Doucki, canyon (10°59.6'N, 12°35.3'W), 1020 m a.s.l., 24.xi.2008 (B.A. Huber), 4♂2♀ in ZFMK (Ar 10183); same data, 2♀ 4 juvs. in pure ethanol, in ZFMK (Gui 79). *Basse-Guinée*: near Koumbaya (10°10.3'N, 12°53.3'W), forest, 220 m a.s.l., 19.xi.2008 (B.A. Huber), 2♂4♀ in ZFMK (Ar 10184); same data, 2♀ 1 juv. in pure ethanol, in

ZFMK (Gui 94). Near Kindia (10°00.8'N, 12°48.6'W), along brook in plantation forest, 540 m a.s.l., 5.xii.2008 (B.A. Huber), 1♀ in pure ethanol, in ZFMK (Gui 98).

Diagnosis. Distinguished from similar congeners (*S. guineensis*, *S. pulchra*) by shorter abdomen, shorter legs, and dark lateral marks on carapace (in addition to dark margin; Fig. 41); from *S. guineensis* also by presence of ventro-distal apophysis on procursus (Fig. 77), all modified hairs on large cheliceral apophyses grouped close together (Fig. 79), and low hump on anterior epigynal plate; from *S. pulchra* also by pair of median projections proximally on male chelicerae (Fig. 83), curved procursus (Figs. 45, 76–77), pointed bulbal apophysis (Fig. 78), and only weakly curved posterior margin of anterior epigynal plate (Figs. 42, 80).

Male (near Maréla). Total body length 6.0, carapace width 1.7. Leg 1: 48.9 (11.7 + 0.6 + 11.6 + 22.3 + 2.7), tibia 2: 7.8, tibia 3: 5.4, tibia 4: 7.6; tibia 1 L/d: 73. Distance PME-PME 170 µm, diameter PME 150 µm, distance PME-ALE 60 µm, distance AME-AME 45 µm, diameter AME 125 µm. Carapace ochre-orange with brown triangular mark posteriorly, brown lateral margins and indistinct lateral marks; ocular area brown, clypeus with pair of brown lines and brown rim, sternum red-brown; legs ochre, tips of femora and tibiae whitish, dark rings subdistally on femora and tibiae and in patella area; abdomen ochre-gray with distinct black pattern dorsally, laterally, and ventrally. Habitus as in Fig. 41, ocular area slightly elevated, secondary eyes with indistinct 'pseudo-lenses' (Fig. 87); clypeus unmodified except sclerotized rim, rim roughly straight; deep thoracic pit and pair of shallow furrows diverging behind pit. Chelicerae as in Fig. 79, with small median projections proximally (Fig. 83), lateral proximal apophyses, large distal apophyses provided with 3–4 modified hairs each, and very small distal apophyses close to fang joints. Palps as in Figs. 43–45; coxa with prominent sclerotized rim retrolaterally; trochanter with simple retrolatero-ventral apophysis; femur with small retrolateral apophysis pointing dorso-distally, with large ventral bulge distally, without ventral or prolateral modification proximally; prolateral femur-patella joint only slightly moved toward ventrally; tarsus with about four stronger hairs; procursus without hinge, curved toward ventrally, with two long ventral hairs bent around procursus and directed toward dorsally, distally with distinctive ventral apophysis and moveable dorsal sclerite embedded in membranous cuticle (Figs. 76–77, 84–85); bulb with simple pointed apophysis with small subdistal branch, arising from membranous basal projection (Fig. 78; sperm duct apparently opens at membranous basal projection at basis of pointed apophysis). Legs without spines and curved hairs, with few vertical hairs, retrolateral trichobothrium on tibia 1 at 1%; prolateral trichobothrium present on all tibiae; pseudosegments barely visible. ALS with eight spigots each (Fig. 88–89); gonopore with two epiandrous spigots (Fig. 90).

Variation. Number of modified hairs on male cheliceral apophyses slightly variable, even within one specimen. Males from Koumbaya and Grotte de Tassacouré with slightly different ventral apophysis distally on procursus (basis of apophysis simply rounded rather than complex as in Fig. 77; cf. fig. 10E in Millot 1941) and with smaller moveable dorsal sclerite (Fig. 86). Tibia 1 in 19 other males: 9.1–12.6 (mean 11.3); small cheliceral apophyses near fang joints in some specimens barely visible; sternum variably dark. The type specimens are bleached but mostly in fair condition, many legs missing, palps and chelicerae missing in lectotype, right palp missing in paralectotype.

Female. In general similar to male; sternum variably dark as in males, sometimes almost black. Tibia 1 in 39 females: 8.9–10.5 (mean 9.7). Epigynum consisting of large anterior plate with low hump in median part and large posterior plate composed of sclerotized posterior arc and pair of distinct anterior plates (Fig. 42); internal genitalia as in Figs. 54 and 82, with distinct globular structures between uterus externus and anterior epigynal plate (Fig. 81). Epigynal shape apparently slightly variable (cf. figs. 10bis D–F in Millot 1941) but most of this variation is due to variable pigmentation. ALS as in male.

Natural history. *S. bineti* was found both in well preserved forests (e.g. under rocks along a stream near Dalaba) and in degraded patches (e.g. in small holes of roadcut near Maréla). It was also common in Sêbory cave, where it occupied small cavities in the cave wall. It vibrated rapidly when disturbed and was seen to build both domed and spherical webs near Koumbaya.

Distribution. Known from several localities in western Guinea (Moyenne-Guinée and Basse-Guinée, Fig. 33).

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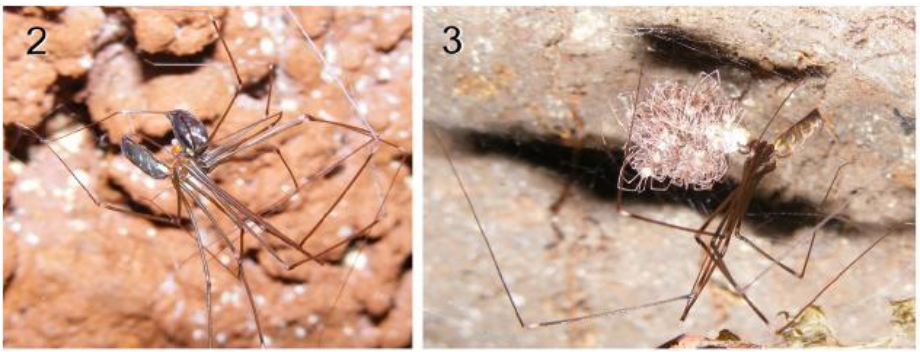

FIGURES 2–16. *Smeringopina*, alive specimens in their natural habitats. 2–3. *S. bineti*, mating pair (Sêbori, Guinea) and female with juveniles (Doucki, Guinea).

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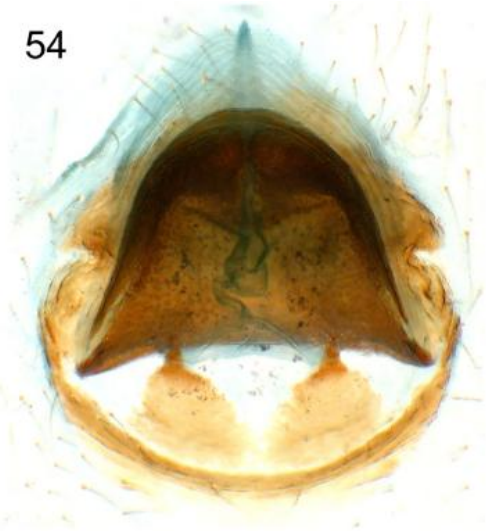
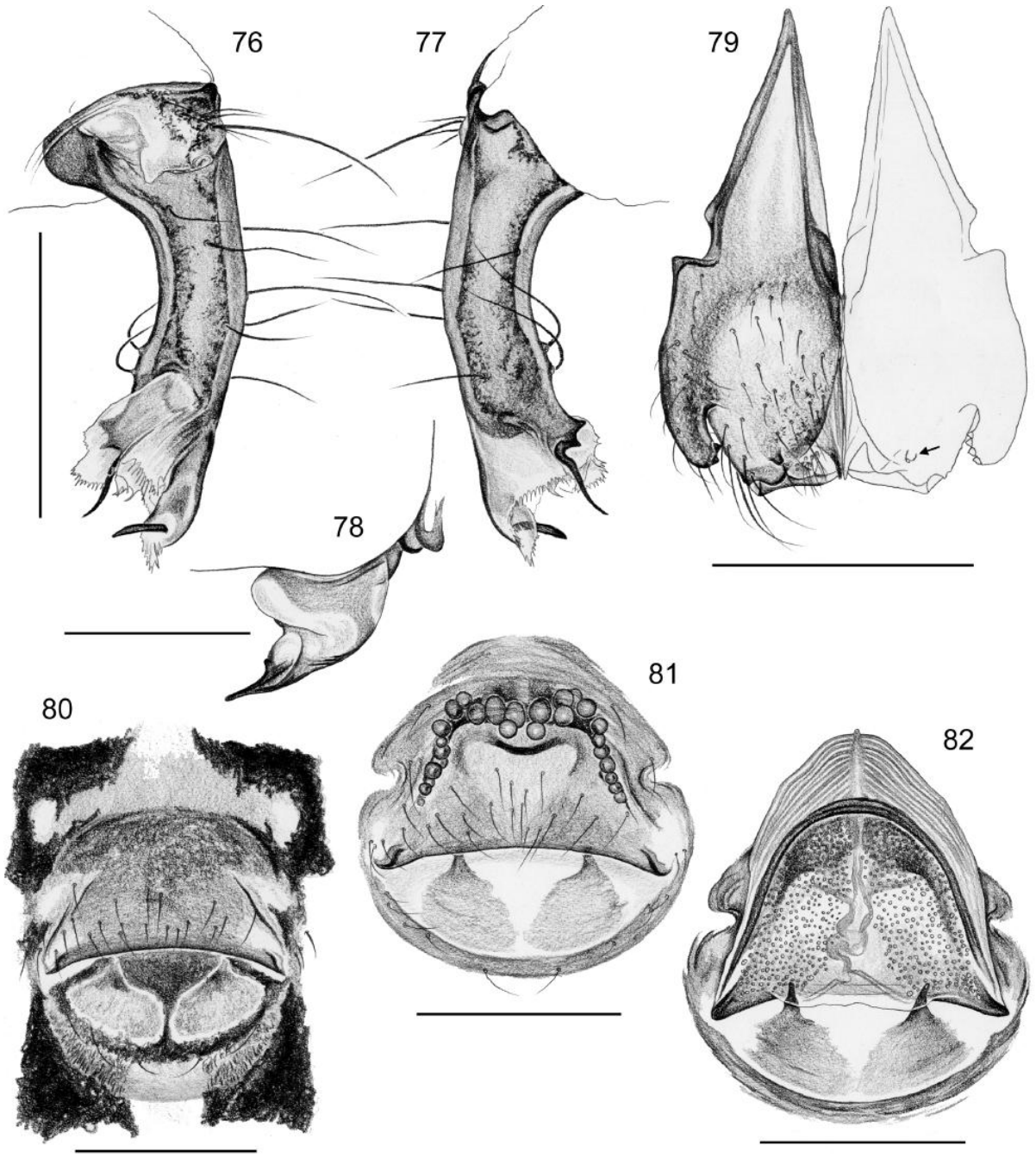
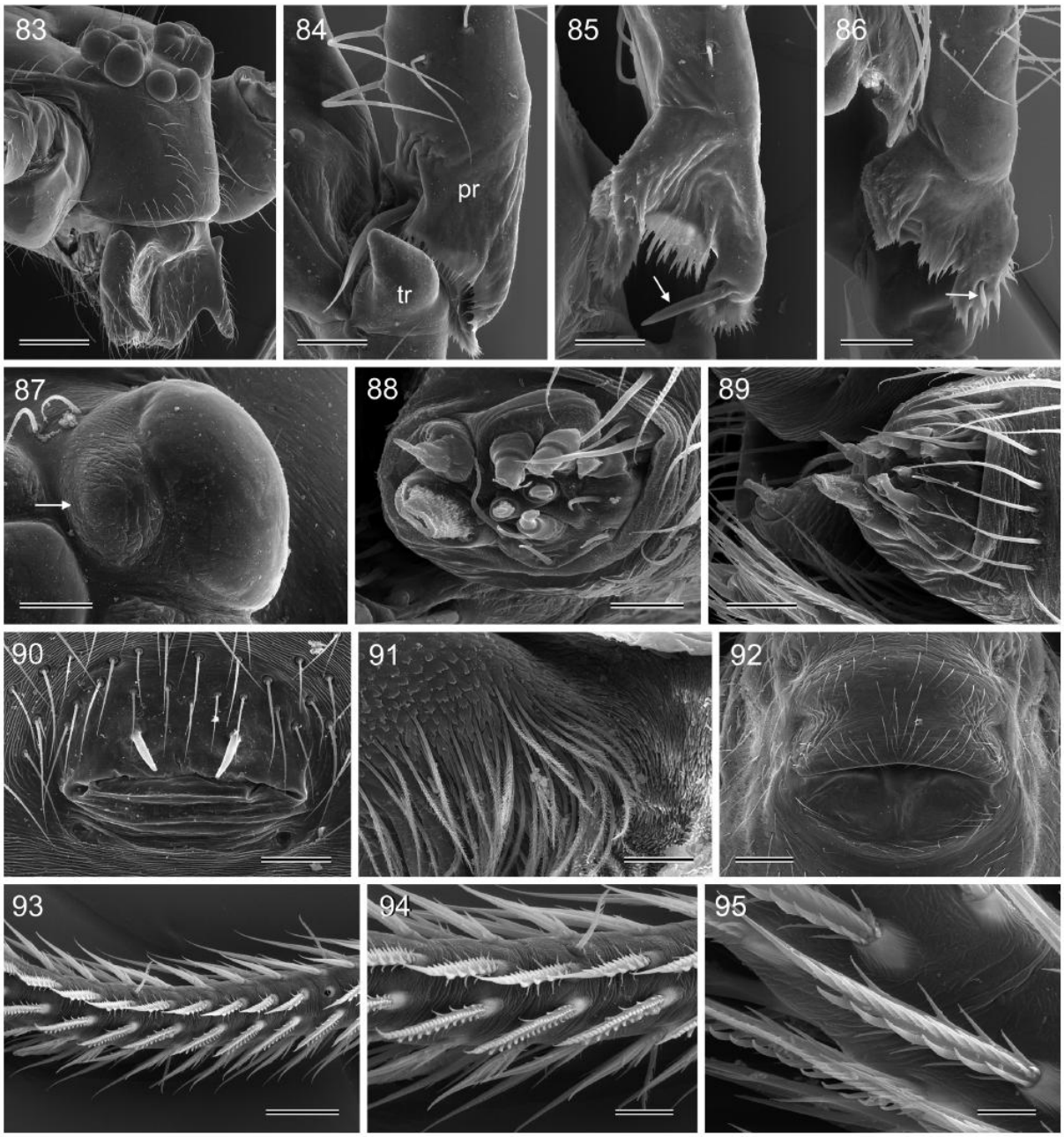
FIGURES 34–45. *S. bineti* (Millot) (41–45). 34–36, 41. Males, dorsal, lateral, and ventral views. 37, 42. Female abdomens, ventral views; arrow points at U-shaped light element. 38–40, 43–45. Left male palps, prolateral, dorsal, and retrolateral views; b: bulb; co: coxa; fe: femur; pa: patella; pr: procursus; ta: tarsus; ti: tibia; tr: trochanter.



FIGURES 46–55. 53–55. Cleared female genitalia, dorsal views; *S. bineti* (Millot) (54).



FIGURES 76–82. *Smeringopina bineti* (Millot). 76–77. Left procursus, prolateral and retrolateral views. 78. Left bulbal process, prolateral view. 79. Male chelicerae, frontal view; arrow points at single modified hair on enlarged hair basis. 80. Epigynum, ventral view. 81–82. Cleared female genitalia, ventral and dorsal views. Scale lines: 0.3 (78), 0.5 (76–77, 79–82).



FIGURES 83–95. *Smeringopina bineti* (Millot). 83. Male prosoma, oblique frontal view. 84. Right procursus, retrolateral view. 85. Left procursus, prolateral view; arrow points at moveable dorsal sclerite. 86. Right procursus, prolatero-dorsal view, male from near Koumbaya; arrow points at moveable dorsal sclerite. 87. Male PLE with 'pseudo-lens'(arrow). 88. Male ALS. 89. Male ALS and PMS. 90. Male gonopore. 91. Endite of left male palp, inner side. 92. Epigynum, ventral view. 93. Right tarsus 4, showing two rows of comb-hairs. 94–95. Comb-hairs on tarsus 4. Abbreviations: pr: procursus; tr: trochanter. Scale lines: 10 µm (95), 20 µm (88, 94), 30 µm (89, 91), 50 µm (87, 93), 60 µm (90), 80 µm (84, 85), 100 µm (86), 200 µm (92), 300 µm (83).