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Six new Afrotropical *Italochrysa* species, with taxonomic notes on other species of the genus

(Neuroptera: Chrysopidae)

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Abstract

Six new species of Chrysopidae are described from tropical Africa: *Italochrysa ampla* **sp. nov.**, *Italochrysa clara* **sp. nov.**, *Italochrysa nobilis* **sp. nov.**, *Italochrysa illustris* **sp. nov.**, *Italochrysa conspicua* **sp. nov.** and *Italochrysa necopinata* **sp. nov.** Redescriptions of *Italochrysa temerata* (NAVÁS, 1915) and *Italochrysa sectoria* (NAVÁS, 1926) are given. The new taxa are compared with other African species of the genus and figures of wings and all essential parts of the genital structures are provided.

Zusammenfassung

Sechs neue afrotropische Arten der Familie Chrysopidae werden beschrieben: *Italochrysa ampla* **sp. nov.**, *Italochrysa clara* **sp. nov.**, *Italochrysa nobilis* **sp. nov.**, *Italochrysa illustris* **sp. nov.**, *Italochrysa conspicua* **sp. nov.** and *Italochrysa necopinata* **sp. nov.** Zwei Arten, *Italochrysa temerata* (NAVÁS, 1915) und *Italochrysa sectoria* (NAVÁS, 1926) werden wieder beschrieben. Die neuen Taxa werden mit anderen Arten der Gattung verglichen und Abbildungen der Flügel und aller wichtigen Teile der Genitalstrukturen gebracht.

Introduction

The genus *Italochrysa* PRINCIPI, 1946 includes about 70 recognised species, distributed over all regions of the Old World. It is represented by 30 species in tropical Africa; 19 of

them having been described or redescribed by TJEDER (1966) in his monographic revision of the Chrysopidae of Southern Africa. Some of the other taxa are in need of revision or have to be regarded as nomina dubia as the types are lost. Six unknown species of this genus are described and two species described by NAVÁS, *Italochrysa temerata* (NAVÁS, 1915) and *Italochrysa sectoria* (NAVÁS, 1926) are redescribed, based on material deposited in the collections of Muséum Royal de l'Afrique Centrale, Tervuren (MRAC), Laboratoire de Faunistique et de Taxonomie, Montpellier (CIRAD), Muséum National d'Histoire Naturelle, Paris (MNHN) and National Collection of Insects, Pretoria (SANC).

Terminology of the wing venation and genital structures follows TJEDER (1966).

Abbreviations: C = costa, Cua = cubitus anterior, Cup = cubitus posterior, dcc = distal cubital cell, M = media, R = radial vein, Rs = radial sector, Sc = subcostal vein.

Descriptions

Italochrysa sectoria (NAVÁS, 1926) (Figs 1-10, 63)

Notochrysa sectoria NAVÁS, 1926: 458 (descr).

Material: 1 ♀ (holotype), Zaire, Banana, 6.VIII.1920, H. SCHOUTEDEN (MRAC). 3♂♂ "Congo Belge" P.N.G. Miss H. DE SAEGER, II/fd/18, 6.V.1952; 5♀♀ "Congo Belge" P.N.G. Miss H. D. SAEGER, Mt. Ndogo, 15.III.1950 and 31.III.1951; 2♀♀ Terr. Rutshura, V/1937, Miss. Prophylactique; 1♀ Nyangwe, 1918, R. MAYNÉ; 1♀ Baudouinville, 17.I. 1933, L. BURGEON; 1♀ Bas Congo, Lemfu, II/1945, Rév. P. DE BEIR; 1♀ Haut Uele: Moto, IV-V/1923, L. BURGEON (MRAC).

General coloration pale brown. Head yellow, vertex sometimes with a red transverse stripe on raised part. Antennae shorter than fore wings, scape and pedicel yellow, flagellum black. Thorax yellow with brown or reddish markings. Pronotum partly reddish, usually with a transverse median stripe united with broad spots laterally and along anterior margin. Mesonotum with a rather broad stripe along anterior margin of prescutum, a similar line along anterior margin of mesoscutum, a large spot on each side over hind part of mesoscutum and a pair of spots anteriorly on mesoscutellum; metanotum similarly spotted. Legs pale with black or brown markings: femora of fore and middle legs with brown stripes and an apical ring, tibiae with stripes on inner side, tarsi dark testaceous, claws dilated; setae pale brown.

Wings (fig. 63) elongate with acute apex. Membrane hyaline with a narrow black spot at wing margin in cell dcc. Pterostigma pale brown. Setae on veins black, marginal fringes pale brown. Fore wings: longitudinal veins pale, but Rs at base and in the middle part and its branches mainly dark. Cup black at base, anal veins black distally near wing margin. Costals almost totally dark in basal wing half, basal subcostal crossvein, crossveins between R and Rs and inner gradates almost totally dark. Hind wings: Rs, gradates and branches from Rs as in fore wings, all other veins pale.

Abdomen yellow with reddish brown transverse stripes over the anterior parts of tergites, sternites almost totally brown with small yellow stripes; sternite 8+9 of males with gonocrista.

Genitalia: ♂, apex of abdomen see fig. 1, parameres figs 2, 3, gonarcus with arcessus figs. 4-6; ♀, apex of abdomen see fig. 8, subgenitale fig. 9, spermatheca fig. 10.

Italochrysa temerata (NAVÁS, 1915) (Figs 11-15, 64)

Nothochrysa temerata NAVÁS, 1915: 100 (descr).

Material: 1♂ (holotype), Katanga, Kapiri, X/1912 (Miss. agric. Leplae) (MRAC).

General coloration pale brown. Head brown without spots, antennae shorter than fore wings; scape and pedicel brown, flagellum black. Thorax pale brown with reddish dorsal markings; pronotum with a pair of large lateral spots confluent near anterior margin; lateral margins pale brown. Mesonotum with a rather broad stripe along anterior margin of prescutum; a smaller spot on each side on the anterior margin of mesoscutum and a pair of small spots anteriorly on the mesoscutellum; metanotum similarly spotted. Legs brown without distinct markings; tarsal claws with basal dilation.

Wings narrow with acute apex (see fig. 64); pterostigma marked with brown; venation predominantly pale. Fore wings: costals in basal half of wings black at Sc; basal subcostal crossvein black, basal crossveins of inner gradate and the following branches of Rs between the gradates blackish; root of Rs and Cup black, anals black at wing margin; black spots over the second cubital crossvein and in the apical part of cell dcc. Hind wings: gradates as in fore wings, all other veins pale.

Abdomen brown; sternite 8+9 with gonocrista. Apex see fig. 11, parameres figs 12, 13, gonarcus and arcessus fig. 14.

I. sectoria and *I. temerata* are closely related to *I. rufostigma* (MCLACHLAN, 1867) and *I. similis* (TJEDER, 1966) from South Africa. The four species have the same general appearance and can be distinguished mainly by differences in ♂ and ♀ genitalia; they are the only species of the genus *Italochrysa* with gonocristae on the ♂ abdomen.

Italochrysa nobilis sp. nov. (Figs 16-24, 65)

Material: 3♂♂ 2♀♀ (holotype and paratypes), Cote d'Ivoire, Bingerville, X/1962, I/1963, X/1963, II/1964; 1♂, Akoupe, 25 km N of Abidjan, VIII/1961, all J. DECELLE (MRAC). 1♀, Togo (B. DUFOUR), Dzogbepime, 6.50 N/ 00.42 E, 3.X.1984, on cacao (CIRAD).

Size: length of fore wings 18-20 mm. Head yellow with a dark brown Y-like mark on raised part of vertex. Antennae longer than fore wings, scape and pedicel yellow, flagellum brown at base, pale brown in distal parts.

Thorax yellow, notum with broad reddish lateral stripes. Legs yellow but tibiae of hind legs almost totally black; pale brown setae; tarsal claws with basal dilation.

Wings: membrane hyaline without dark markings (fig. 65). Pterostigma marked with brown; setae on veins dark brown, marginal fringes pale brown. Fore wing: all veins near wing base black, longitudinal veins otherwise pale; all crossveins, distal parts of anals and marginal forks greyish; faint brown shadows at base of Cup. Hind wing: basal parts of Sc and R and hind margin of wing black; costals, crossveins between R and Rs, Rs and its branches dark greyish; all other veins pale.

Abdomen reddish brown dorsally, otherwise yellow, with pale brown setae. Genitalia ♂: apex of abdomen see fig. 16, parameres figs 17, 18, gonarcus with arcessus figs 19, 20. ♀: apex of abdomen see fig. 22, subgenitale fig. 23, spermatheca fig. 24.

Italochrysa nobilis is related to species of the *fulvicornis*-group (general coloration

pale yellowish brown with brown or yellow or reddish flagellum and unspotted wings; parameres of males usually with one or more teeth in distal parts); it can easily be distinguished from all hitherto known species of this group (*I. fulvicornis* KIMMINS, 1955, *I. lyrata* TJEDER, 1966, *I. serrata* TJEDER, 1966 and *I. falcata* TJEDER, 1966) by the markings on vertex and the black hind tibiae.

Italochrysa necopinata sp. nov. (Figs 25-33, 66)

Material: 1♂ (holotype) 2♀♀ (paratypes), Zimbabwe, Laurenceville, Vumba Mts., 1500 m, 19.05 S/ 32.04 E, 18.X.1989 and 5.X.1990, N.J. DUKE (SANC).

Size: length of fore wings 18,5 - 19 mm. Head yellow with reddish spots on genae and laterally on clypeus, a broad red stripe in the furrow on each side between raised part of vertex and eyes and two anteriorly confluent stripes on raised part of vertex. Antennae slightly longer than wings; scape yellow with a broad reddish dorsal stripe; pedicel and flagellum reddish brown in proximal part, yellow distally; setae on flagellum dark. Thorax yellow with reddish brown markings. Pronotum with a short median stripe in anterior half and with large lateral stripes; meso- and metanotum with reddish lines along the furrows between prescutum, scutum and scutellum, on hind margin of mesoscutellum and near the wing bases. Legs yellowish, hind femora with long black streaks on upper side; tarsal claws with basal dilation.

Wings (fig. 66): Membrane hyaline, fore wings with pale brown shadings at wing margin in cell dcc; pterostigma pale reddish; setae on veins and marginal fringes brown; longitudinal veins pale with brown interruptions at crossveins, C marked with red at base; anals dark brown in distal parts near wing margin; most crossveins dark brown. Hind wings generally paler; most costals and gradates entirely brown, the other crossveins brown at one or both ends.

Abdomen pale brown, tergites with transverse red stripes in posterior part; setae pale brown. Genitalia ♂: apex of abdomen see fig. 25, parameres figs 26, 27, gonarcus with arcessus figs 28, 29. ♀: apex of abdomen with subgenitale see figs 30-32, spermatheca fig. 33.

Italochrysa necopinata also belongs to the *fulvicornis*-group and seems closely related to *I. lyrata* TJEDER, described from Zimbabwe. The two species can be distinguished from each other only by examination of male and female genitalia which are quite different.

Italochrysa clara sp. nov. (Figs 34-39, 67)

Material: 1♂ (holotype), Cameroon, M Fov, 4.IV.1978, B. DE MIRÉ (MNHN).

Size: length of fore wings 23 mm. Head, thorax and abdomen brown (discoloured); antennae shorter than wings, pale brown. Legs brown with indistinct darker markings, setae pale brown; tarsal claws with basal dilation.

Wings (fig. 67): membrane hyaline without spots and shadings; pterostigma indistinct; setae on veins and marginal fringes black. Fore wings: longitudinal veins pale with brown interruptions at crossveins; all crossveins, branches of Rs and marginal forks dark brown. Venation of hind wings much as in fore wings, but veins near wing base and costals pale.

Apex of abdomen see fig. 34, parameres figs 35, 36, gonarcus and arcessus figs 37, 39.

Italochrysa clara also belongs to the *fulvicornis*-group but owing to the discoloration of the body it is not possible to state whether there are differences in coloration. The male genitalia are quite distinct from those of all other known species of this group.

Italochrysa ampla sp. nov. (Figs 40-45, 68)

Material: 1♂ (holotype), Cameroon, O Kor Kouda, 25.III.1977, B. DE MIRÉ (MNHN).

Size: length of fore wings 26 mm. Head pale brown, toruli red, vertex with two red confluent stripes on raised part. Antennae about as long as fore wings, pale brown; scape and pedicel with a dark brown stripe on upper side. Thorax dark brown (discoloured). Legs pale brown with pale and brown setae; tarsal claws with basal dilation.

Wings (fig. 68): membrane hyaline without spots or shadows; pterostigma marked with dark brown. Setae on veins and marginal fringes brown. Fore wings: longitudinal veins pale with brown interruptions at crossveins; root of Cua and Cup and distal parts of anals blackish; costals near wing base dark brown, otherwise pale; most other crossveins brown at one or both ends. Venation of hind wings as in fore wings but root of Cua and Cup and anals pale.

Abdomen pale brown with pale setae. Apex see fig. 40, parameres figs 41, 42, gonarcus and arcessus figs. 44, 45.

Italochrysa ampla superficially resembles *I. amplipennis* TJEDER from South Africa, which also belongs to the *fulvicornis*-group; it is almost as large, with similar broad wings with a broadly rounded apex. The genital structures, in particular the parameres, are very distinct and allow the species to be easily distinguished.

Italochrysa illustris sp. nov. (Figs 46-55, 69)

Material: 1♂ (holotype), Eala, VII/1936, J. GHESQUIÈRE (MNHN). Paratypes: 1♂, Bambesa, X/1939, L. BREDA and 1♀, Lulua Kapanga, V/1933, F.G. OVERLAET (both in MRAC).

Size: length of fore wings 22-24 mm. Head unspotted, pale brown; antennae slightly longer than fore wing, flagellum brown. Thorax brown, notum with broad reddish stripes laterally. Legs unspotted, pale brown with brown setae.

Wings (fig. 69): membrane hyaline without spots and shading; pterostigma marked with pale brown. Setae on veins and marginal fringes brownish. Fore wings: longitudinal veins generally pale, but dark brown near wing base. Crossveins dark brown near wing base, pale or pale brown otherwise. Venation of hind wings as in fore wings but generally paler.

Abdomen pale brown, tergites partly dark brown. Apex of male abdomen see fig. 46, parameres figs 47, 48, gonarcus and arcessus figs 49-51. Apex of female abdomen see fig. 53, subgenitale fig. 54, spermatheca fig. 55.

Italochrysa illustris may easily be recognised by the long brown antennae and the red lateral markings on the thorax. The structures of the male genitalia are quite distinct and do not suggest a relationship to any other known species of the genus.

Italochrysa conspicua **sp. nov.** (Figs 56-62, 70)

Material: 1♂ (holotype) 1♀ (paratype), Cote d'Ivoire, Bingerville, I/1963, X/1962, J. DECELLE (MRAC).

Size: length of fore wings 16-18 mm. Head, thorax and abdomen yellow with brown markings. Head: face yellow with brown lateral spots on genae, raised part of vertex with broad lateral stripes, confluent anteriorly and broad brown stripes along eye margin, over toruli, scape and pedicel; scape also with indistinct stripes laterally. Flagellum yellow, antennae shorter than fore wings. Pronotum with broad lateral and two interrupted narrow median stripes; small yellow spots within the lateral stripes. Meso- and metanotum: prescutum with median and lateral stripes along the anterior margin, stripes along margins and near wing base of mesoscutum, and a pair of spots anteriorly on mesoscutellum. Metanotum similarly spotted. Legs yellow with pale brown setae; tarsal claws with basal dilation.

Wings (fig. 70): membrane hyaline, fore wings with very faint shading in cell dcc. Pterostigma conspicuously marked with dark brown; setae on veins and marginal fringes brown. Fore wings: longitudinal veins pale, but brown at root and with brown interruptions at crossveins; distal parts of anals brown and faintly shaded at wing margin. Costals dark brown in proximal part, pale before pterostigma; basal subcostal crossvein dark, all other crossveins indistinctly greyish at one or both ends. Hind wings much paler, most crossveins brown at ends, all other veins pale.

Abdomen yellow with brown transverse stripes over anterior parts of tergites; sternites yellow, setae pale brown. Apex of male abdomen see fig. 56, parameres figs. 57, 58, gonarcus with arcessus fig. 59. Apex of female abdomen see fig. 60, subgenitale fig. 61, spermatheca fig. 62.

Italochrysa conspicua can be distinguished from all other known species by the distinct markings on the head and pronotum, the strongly marked pterostigma and the structures of the genital region.

Acknowledgements

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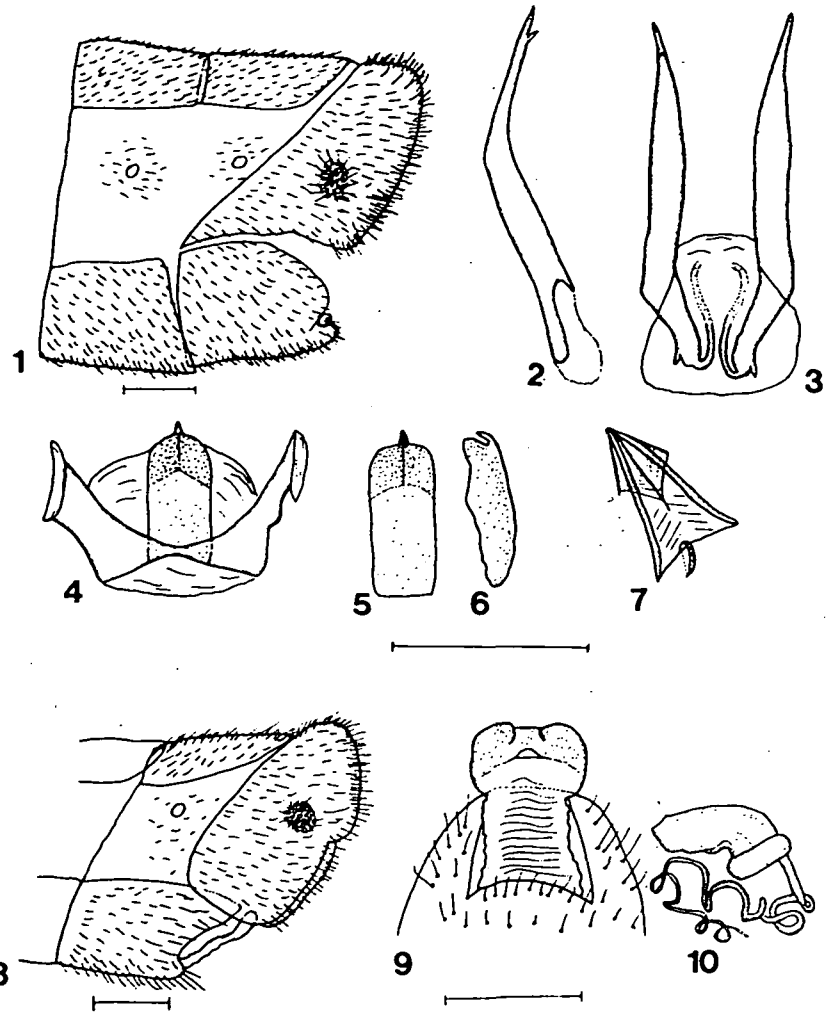


Fig. 1-10. - *Italochrysa sectoria*. - (1) Apex of ♂ abdomen, lateral view. - (2) Parameres, lateral view. - (3) Ditto, dorsal view. - (4) Gonarcus with arcessus, caudal view. - (5) Arcessus, caudal view. (6) Ditto, lateral view. - (7) Hypandrium internum, dorsal view. (8) Apex of ♀ abdomen, lateral view (holotype). - (9) Subgenitale, ventral view. - (10) Spermatheca, lateral view. (All figures, scale = 0.5 mm.)

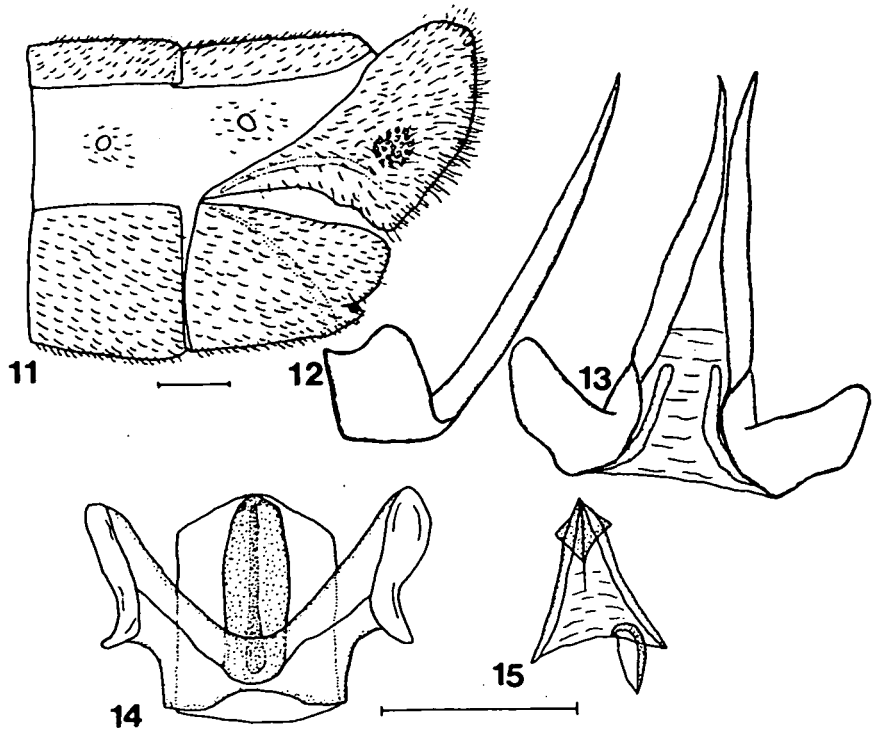


Fig. 11-15. - *Italochrysa temerata* (holotype ♂). - (11) Apex of abdomen, lateral view. - (12) Parameres, lateral view. -. (13) Ditto, ventral view. - (14) Gonarcus with arcessus, caudal view. - (15) Hypandrium internum, ventral view.

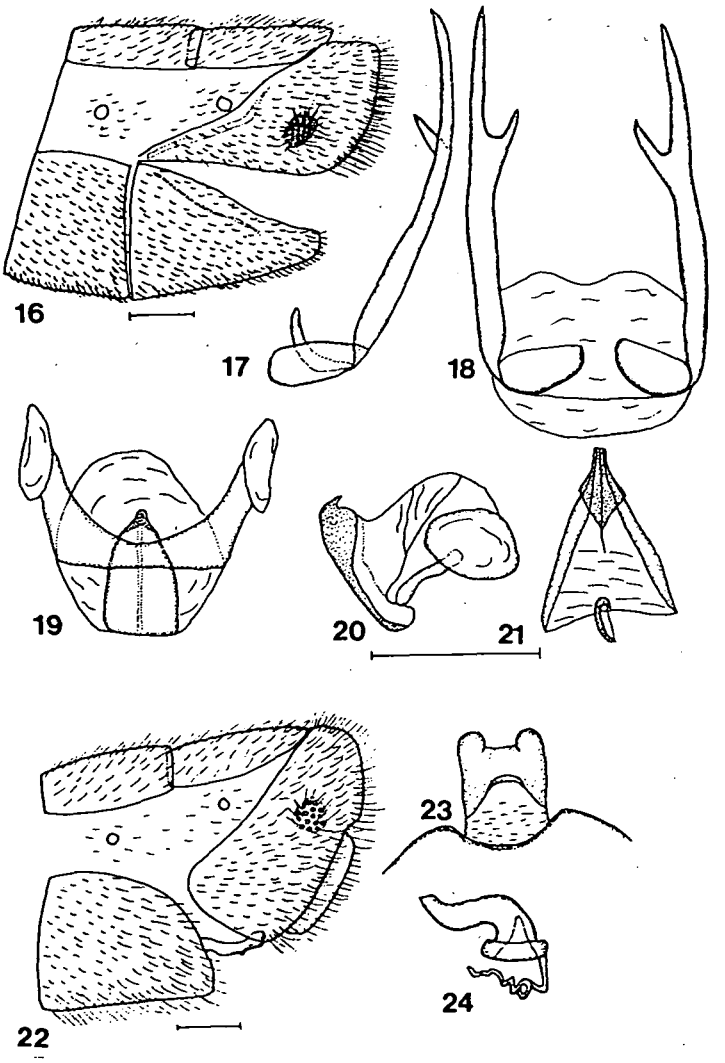


Fig. 16-24. - *Italochrysa nobilis*. - (16) Apex of ♂ abdomen, lateral view (holotype).. - (17) Parameres, lateral view. - (18) Ditto, ventral view. - (19) Gonarcus with arcessus, caudal view. - (20) Ditto, lateral view. - (21) Hypandrium internum, ventral view. - (22) Apex of ♀ abdomen, lateral view. - (23) Subgenitale, ventral view. - (24) Spermatheca, lateral view.

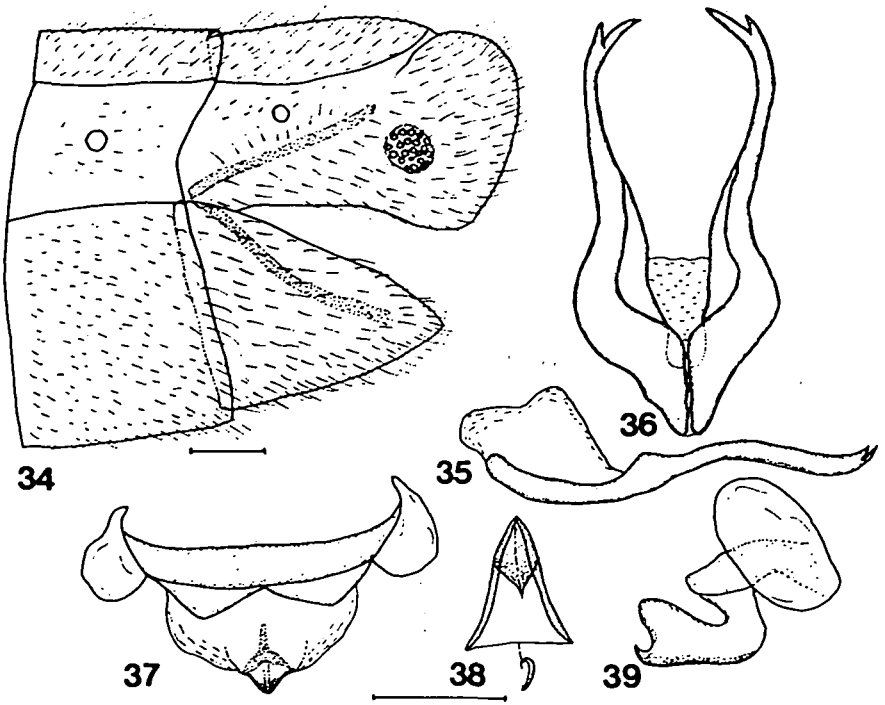


Fig. 25-33 - *Italochrysa necopinata*. - (25) Apex of ♂ abdomen, lateral view (holotype). - (26) Parameres, lateral view. - (27) Ditto, ventral view. - (28) Gonarcus with arcessus, dorsal view. - (29) Ditto, lateral view. - (30) Subgenitale, ventral view. - (31) Apex of ♀ abdomen, lateral view. - (32) Subgenitale, lateral view. - (33) Spermatheca, lateral view.

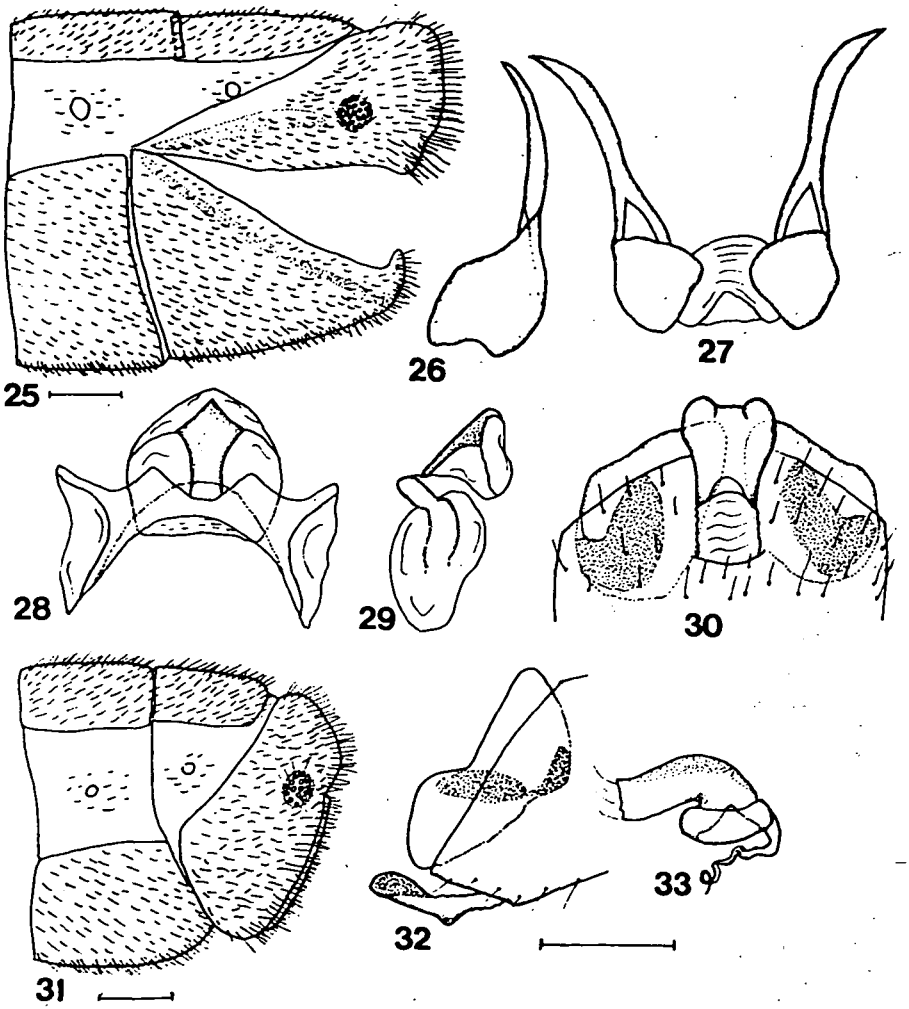


Fig. 34-39. - *Italochrysa clara* (holotype ♂). - (34) Apex of abdomen, lateral view. - (35) Parameres, lateral view. - (36) Ditto, ventral view. - (37) Gonarcus with arcessus, caudal view. - (38) Hypandrium internum, ventral view. - (39) Gonarcus with arcessus, lateral view.

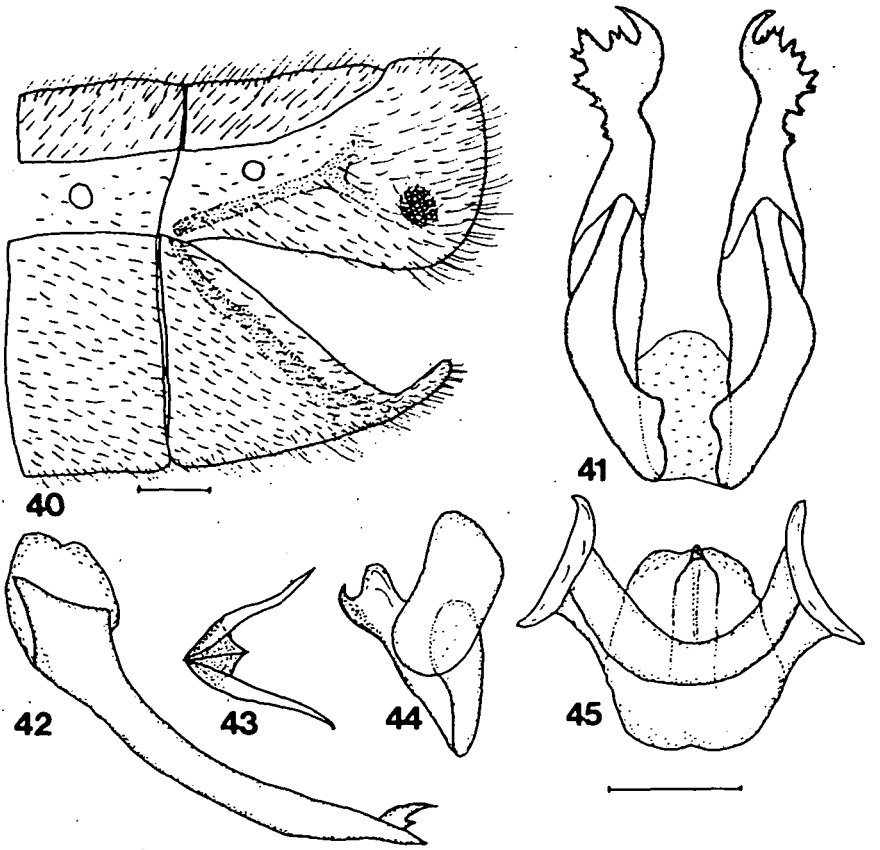


Fig. 40-45 - *Italochrysa ampla* (holotype ♂). - (40) Apex of abdomen, lateral view. - (41) Parameres, ventral view. - (42) Ditto, lateral view. - (43) Hypandrium internum. - (44) Gonarcus with arcessus, lateral view. - (45) Ditto, caudal view.

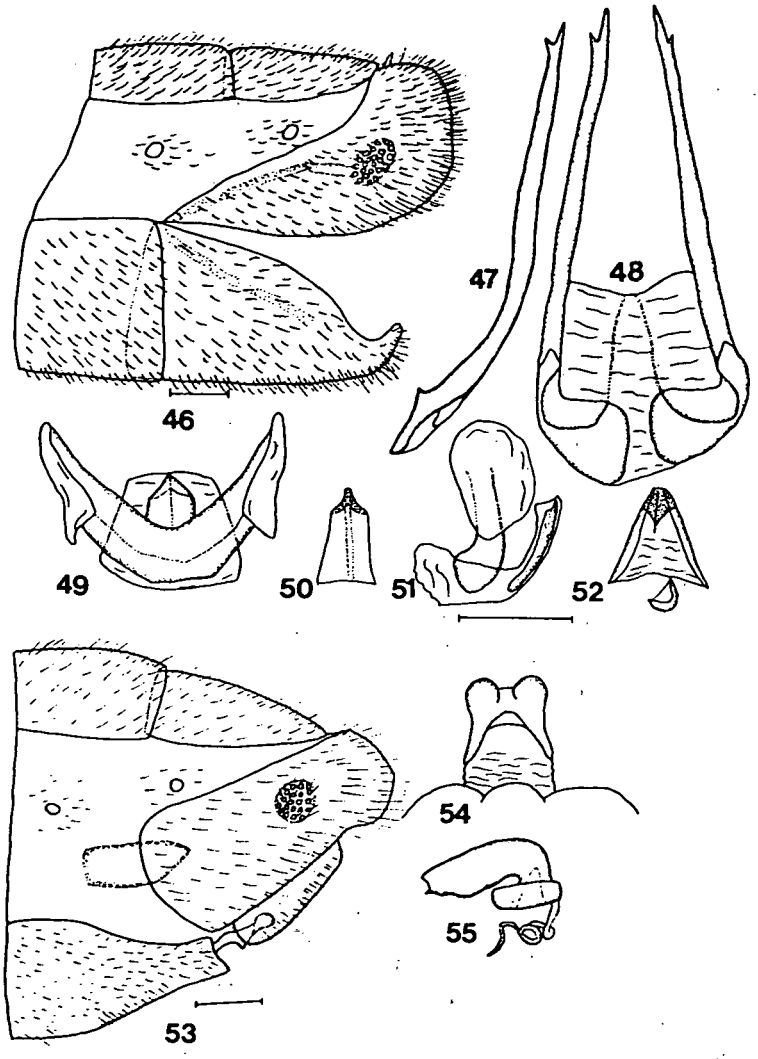


Fig. 46-55 - *Italochrysa illustris*. - (46) Apex of abdomen, lateral view (holotype ♂). - (47) Parameres, lateral view. - (48) Ditto, ventral view. - (49) Gonarcus with arcessus, caudal view. - (50) Arcessus, caudal view. - (51) Gonarcus with arcessus, lateral view. - (52) Hypandrium internum, ventral view. - (53) Apex of ♀ abdomen, lateral view. - (54) Subgenitale, ventral view. - (55) Spermatheca, lateral view.

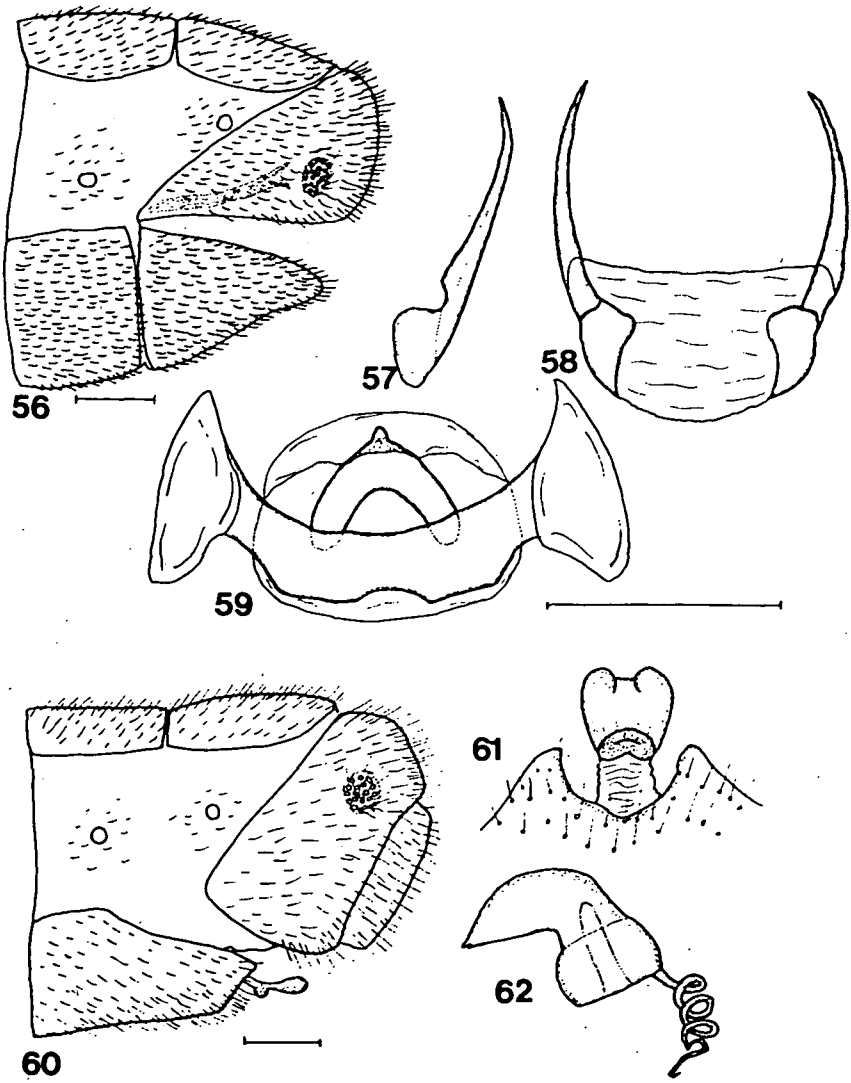
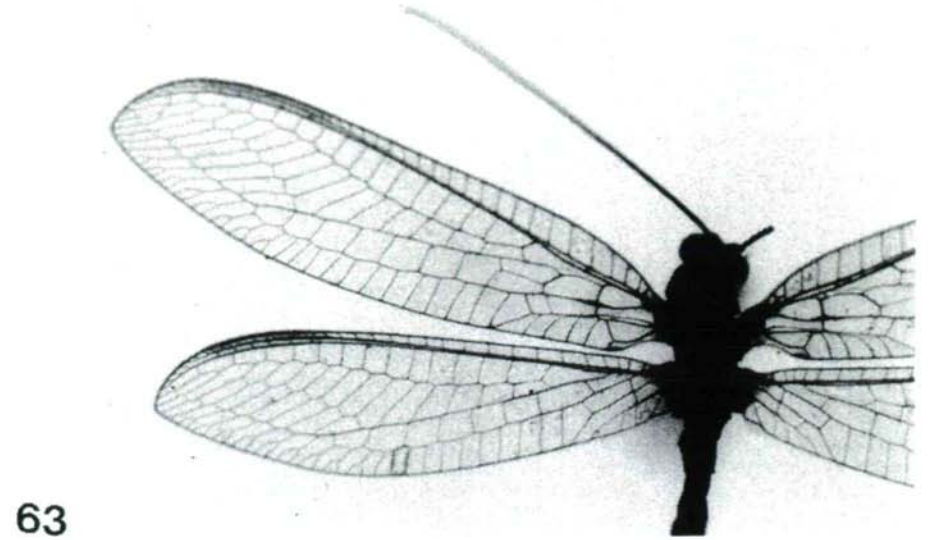


Fig. 56-62 - *Italochrysa conspicua*. - (56) Apex of abdomen, lateral view (holotype ♂). - (57) Parameres, lateral view. - (58) Ditto, ventral view. - (59) Gonarcus with arcessus, caudal view. - (60) Apex of ♀ abdomen, lateral view. - (61) Subgenitale, ventral view. - (62) Spermatheca, lateral view.



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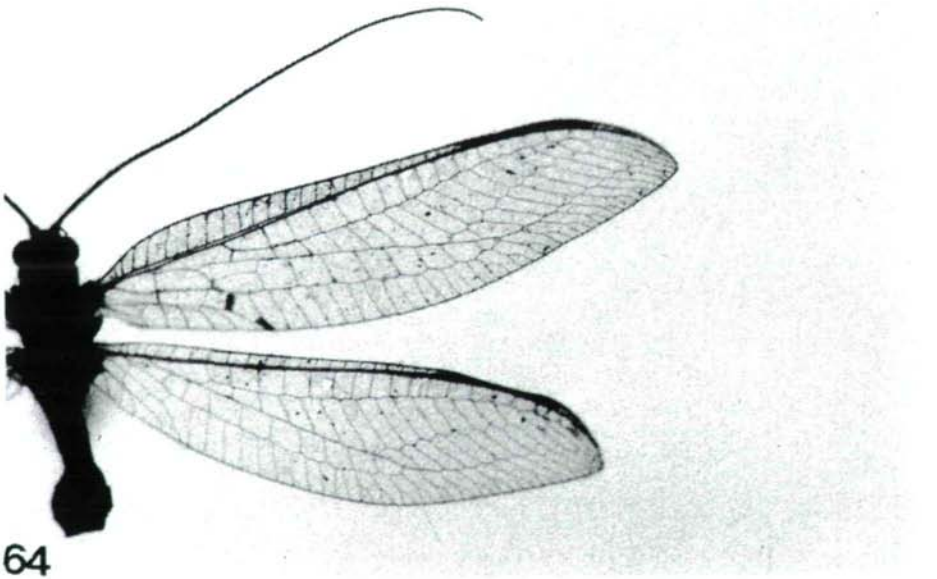

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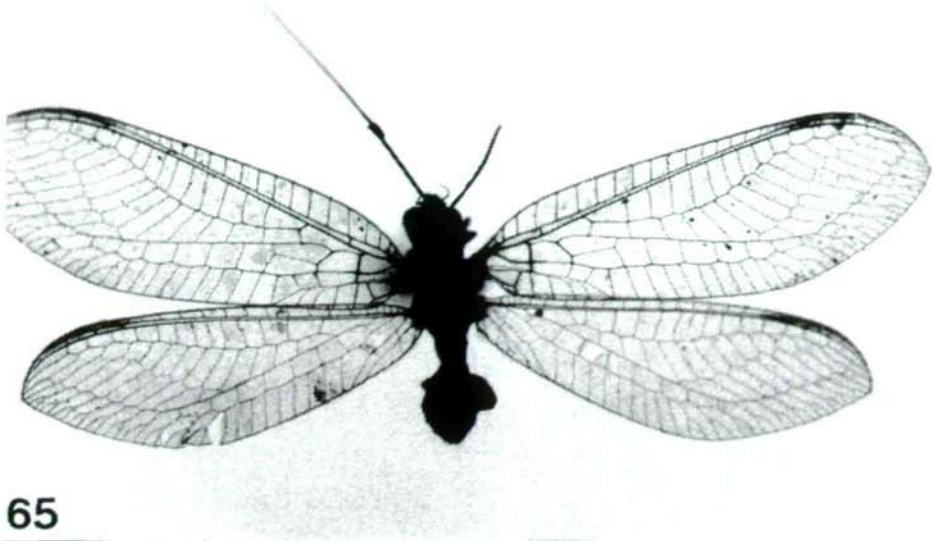
Fig. 63 - *Italochrysa* sectoria (holotype ♀).
Fig. 64 - *Italochrysa temerata* (holotype ♂).



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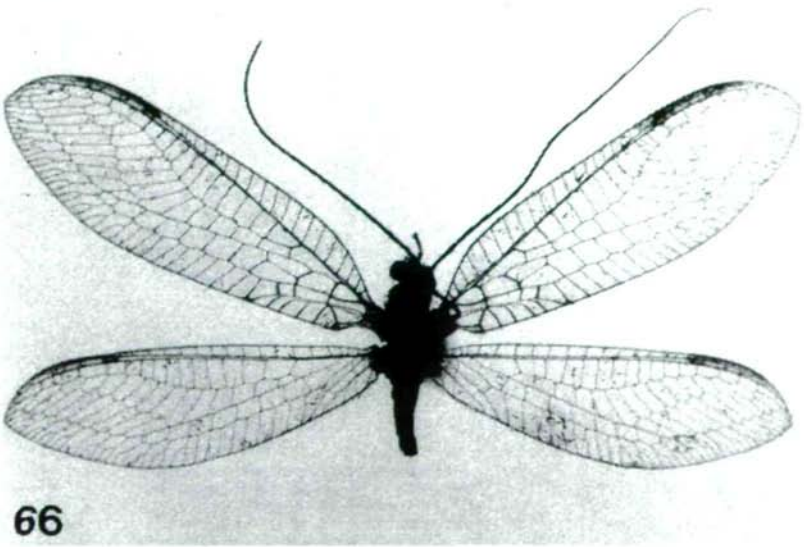

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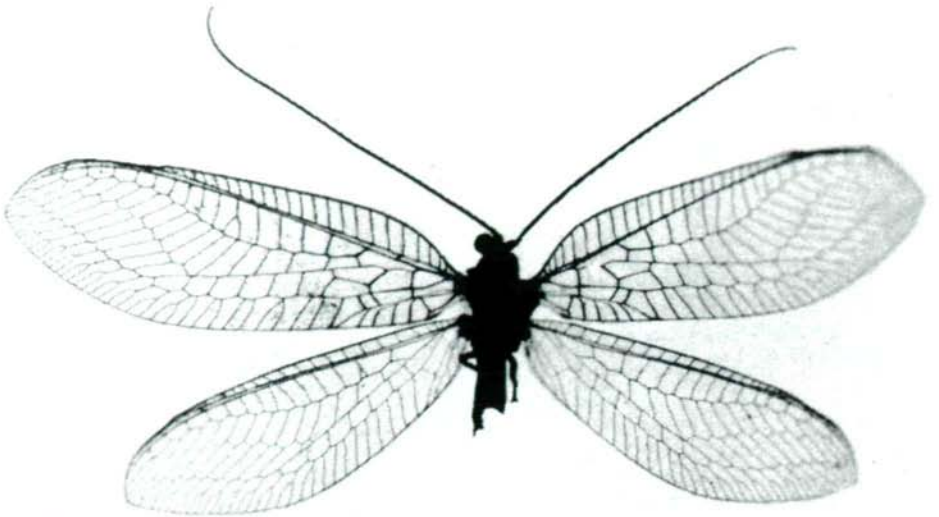
Fig. 65 - *Italochrysa nobilis* (paratype ♀).
Fig. 66 - *Italochrysa necopinata* (holotype ♂).



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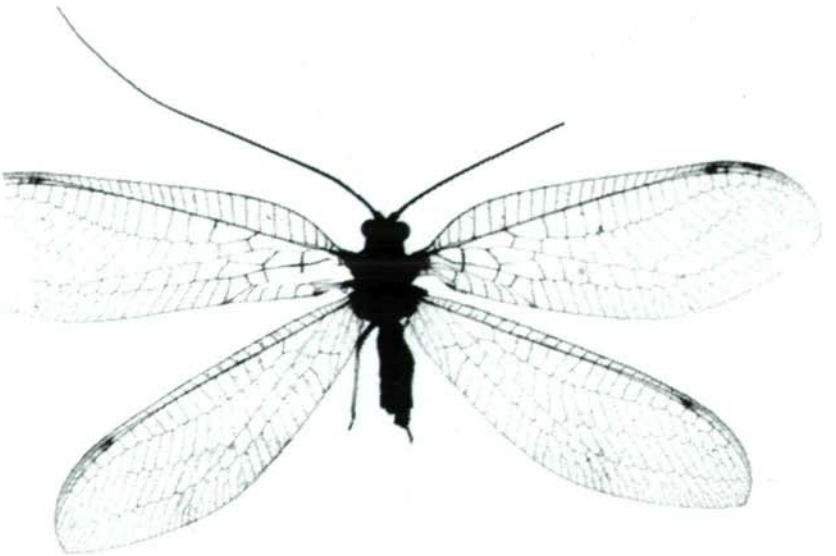

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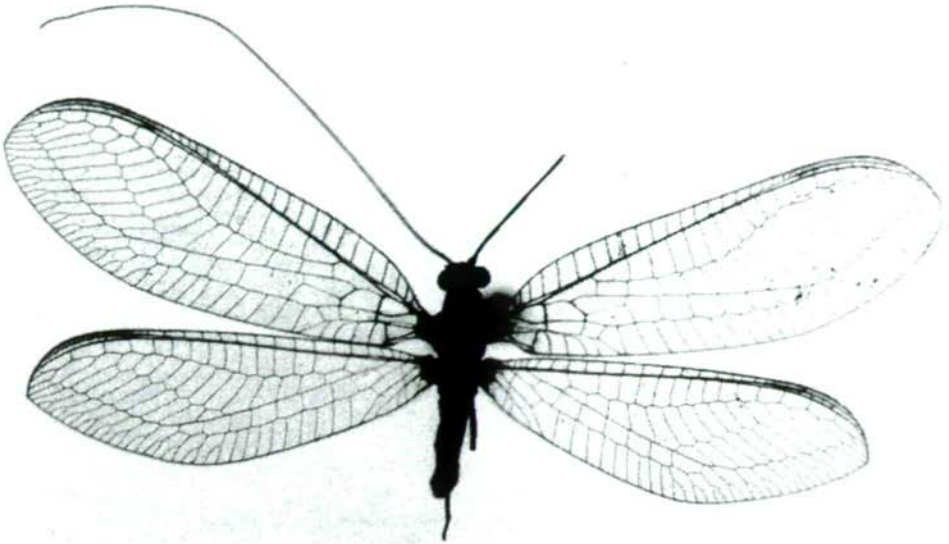
Fig. 67 - *Italochrysa clara* (holotype ♂).
Fig. 68 - *Italochrysa ampla* (holotype ♂).



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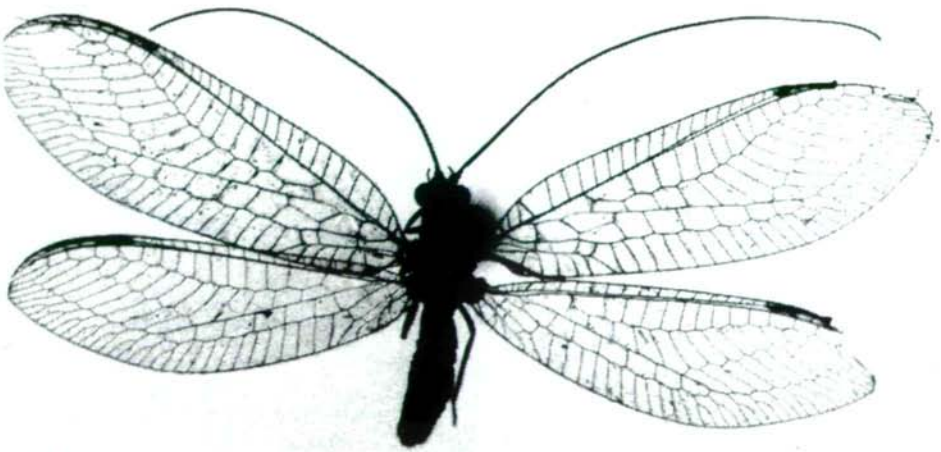

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Fig. 69 - *Italochrysa illustris* (holotype ♂).
Fig. 70 - *Italochrysa conspicua* (paratype ♀).

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Literaturbesprechung

PULLIN, A.S. 2002: Conservation Biology. - Cambridge University Press, Cambridge, 345 S.

Naturschutz ist eine schnell zunehmende neue Disziplin, die biologische Prinzipien mit dem Design effektiver Strategien eines nachhaltigen Managements von Populationen, Arten und gesamten Ökosystemen vereint. Bisher erschienene "Lehrbücher" wiesen eine gewisse "Steifheit" und/oder Einseitigkeit (z.B. ausschließlich Management) auf; dieses Lehrbuch geht eher den "biologischen" Weg, sprich es baut auf den natürlichen Gegebenheiten auf, indem zunächst die großen Welt-Ökosysteme, der menschliche Einfluß, die Effekte der Habitatvernichtung und -störung und der "nachhaltige Gebrauch" besprochen werden. In einem mehr praktischen Teil geht es um die Auswahl von Schutzgebieten, deren Design und Management, den speziellen Schutz der Arten, Biotopschutz und ökologische Restaurierung. Die einzelnen Kapitel sind knapp gehalten, gut illustriert und damit nie langweilig; weiterhin beinhaltet jedes Kapitel eine Zusammenfassung der Schlüsselideen, Punkte für eine Diskussion, wichtige websites, Vorschläge zu weiteren Informationen und Textboxen mit interessantem zusätzlichen Material.

Ein modernes, leicht lesbares, dabei nicht weniger informatives Lehrbuch, das jedem an Naturschutz interessierten Studenten nur bestens empfohlen werden kann.

R. GERSTMEIER

ARNETT, R.H. Jr., THOMAS, M.C., SKELLEY, P.E. & FRANK J.H. 2002: American Beetles, Vol 2. Polyphaga: Scarabaeoidea through Curculionoidea. - CRC Press, Boca Raton, 861 S.

Vor fast 40 Jahren erschien von Ross H. ARNETT Jr. "The Beetles of the United States: A Manual for Identification", ein unentbehrliches Standardwerk für professionelle und

Amateur-Entomologen. "American Beetles" soll als verbesserter Nachfolger die "Beetles of the United States" ersetzen. Ziel ist es, die Bestimmung adulter Käfer der USA bis zu Familie und Gattung zu ermöglichen, und zwar mit Hilfe von Tabellen, Beschreibungen und Illustrationen. Auch wenn sich unser Wissen über viele Familien verbessert und erweitert hat, bleibt doch die ursprüngliche Konzeption der Originalausgabe erhalten. Band 2 beinhaltet die Familien der Serien Scarabaeiformia, Elateriformia, Bostrichiformia und Cucujiformia (also der Familien Lucanidae bis Curculionidae).

Die Texte zu jeder Familie enthalten als Familiendiagnose eine ausführliche Beschreibung der Imagines und Larven, des Habitats, eine Anmerkung zum Status der Klassifikation, die Artenzahl und die weitere Verbreitung. Die Bestimmungsschlüssel zu den jeweiligen Gattungen sind sehr ausführlich und durch zahlreiche Abbildungen (Zeichnungen, SW- und REM-Fotos) bestens illustriert. Jede Gattung wird dann hinsichtlich ihrer Nomenklatur, Biologie und Verbreitung hinreichend besprochen. Die Bibliographie enthält zu jeder Familie die zitierte Literatur.

In beiden Bänden werden somit 131 in Nordamerika vorkommende Familien auf über 1300 Seiten analysiert und illustriert - ein unschätzbares Bestimmungs- und Nachschlagewerk auf modernem taxonomischen Niveau. R. GERSTMEIER

JANZEN, J.W. 2002: Arthropods in Baltic Amber.- Ampyx Verlag, Halle (Saale),167 S.

Bücher über Inklusen des Baltischen Bernsteins erfreuen sich zunehmender Beliebtheit, gleichermassen steigt die Menge des angebotenen Materials auf entsprechenden "Börsen" und im Internet an. Um sich über die "Bandbreite" der angebotenen Arthropoden informieren zu können, dient dieser kleine, liebevoll illustrierte Bildband. Er ist zweisprachig (englisch-deutsch) gehalten, bietet einen auf "Cladogrammen" basierenden "Habitus-Bestimmungsschlüssel" und Merkmalslisten aller im Baltischen Bernstein auftretenden Arthropodenordnungen. Wirklich bemerkenswert ist die Qualität der Farbtafeln; sie übertrifft dank einer speziellen Aufnahmetechnik (über einer Lichtfalle, die kein Licht mehr am Untergrund reflektiert) alle bisherigen Pubikationen weitaus an Schärfe, Brillanz und Dreidimensionalität.

Wer sich einen Eindruck über die Vielfalt der Insekten im Baltischen Bernstein verschaffen will, kommt an diesem Buch nicht vorbei.

R. Gerstmeier

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