

New Oriental species of *Symmorphus* Wesmael, with description of a new subgenus (Hymenoptera: Vespidae, Eumeninae)

by

J. M. CUMMING & J. van der VECHT

ABSTRACT. — The subgenus *Parasymmorphus* of the genus *Symmorphus* Wesmael is newly described to accomodate *S. negrosensis* new species, *S. momunganensis* (Schulthess) and *S. parvilineatus* (Cameron) (new combination for *Eumenes parvilineata* Cameron). The remaining species of *Symmorphus*, including *S. alkimus* new species, are assigned to *Symmorphus sensu stricto*. The subgenus *Koptodynerus* Blüthgen, proposed for *S. declivis* Harttig, is newly synonymized with *Symmorphus sensu stricto*.

Introduction

The eumenine genus *Symmorphus* Wesmael is distributed throughout the Nearctic, Palearctic and Oriental regions, but is rarely encountered in the latter region. Study of some Oriental specimens of *Symmorphus* in the U.S. National Museum, Washington, D.C. and the Henry Townes collection, Gainesville, Florida, first by the junior author and later by the senior author, who is currently revising the genus, revealed two new species. Both are described below, along with a new subgenus to accomodate three Oriental species, including one of the new species.

Some terms used in the descriptions require definition or comment. The ocular ocellar line (OOL) is the minimum distance between the inner eye margin and the outer margin of the posterior ocellus. The posterior ocellar line (POL) is the minimum distance between the inner margins of the posterior ocelli, while the lateral ocellar line (LOL) is the minimum distance between the inner margins of the anterior and posterior ocelli. The length of the trans-scutal sulcus on the mesonotum is measured medially from its posterior margin to the trans-scutal articulation, which runs along the anterior edge of the sulcus. Description of surface sculpture and punctuation follows Harris (1979) and should be discernible by comparison with the photomicrographs presented in that work.

Symmorphus (*Parasymmorphus*) new subgenus

Type species. — *Odynerus* (*Symmorphus*) *momunganensis* Schulthess, 1934.

Diagnosis. — Members of this subgenus can be separated from those of the nominate subgenus by presence of a 4-toothed mandible in females, dorsally complete epicnemial carina, distally free posteriorly produced valvula, narrowly acute propodeal orifice dorsally, and well developed depressed apical margin of metasomal segment 2.

Female. — Clypeus shallowly emarginate apically. Vertex with cephalic foveae small, maximum foveal diameter no greater than 0.50 trans-scutal sulcus length; widely to very widely spaced, minimum interval between foveae 0.71 to 1.02 POL; each fovea bordered posteriorly by a sharp carina. Mandible 4-toothed (figs. 1a, 2a).

Pronotum with carina at crest of anterior face complete (somewhat faint medially in *S. negrosensis*); humeral angle obtusely rounded, not projected. Notaulus obsolete or faint medially, deep posteriorly. Mesepisternum with epicnemial carina complete dorsally, extended to posterolateral margin of pronotum. Metanotum nearly vertical with narrow dorsal surface. Propodeum with posteriorly produced valvula, free distally from posterolaterally projected submarginal carina (figs. 1c, 2c); propodeal orifice narrowly acute dorsally (figs. 1c, 2c).

Metasomal tergum 1 with broad shallow longitudinal furrow, without deeper narrow medial sulcus. Metasomal sternum 2 in profile, strongly convex (figs. 1d, 2d) or abruptly truncate posteriorly of basal sulcus (cf. fig. 3f); apical margin of segment 2 depressed, well developed, its

maximum length 2.22 to 2.50 length of trans-scutal sulcus (figs. 1d, 1e, 2d, 2e).

Relatively large wasps, length to apex of metasomal tergum 2, 10.5 to 13.5 mm, with moderately dense foveolate to foveate major punctation on metasomal sternum 1 (median transverse carina and longitudinal carinae absent), uniform foveolate major punctation on metasomal segment 2 (somewhat sparser medially in *S. parvilineatus*), moderately dense pubescence, and lightly to moderately infusate wings.

Male. — Unknown.

Included taxa and geographical distribution. — *S. (Parasymmorphus)* contains *S. parvilineatus* and *S. momunganensis*, in addition to the new species described below, and is entirely Oriental in distribution.

S. (Parasymmorphus) parvilineatus (Cameron) new combination

Eumenes parvilineata Cameron, 1904.

Nortonia parvilineata (Cameron). Transferred to *Nortonia* Saussure, by Bequaert, 1928.

Pseudonortonia parvilineata (Cameron). Transferred to *Pseudonortonia* Giordani Soika, by Giordani Soika, 1941.

Material examined. — Holotype: female, B.M. Type 18.969.

Diagnosis. — Specimens of *S. parvilineatus* can be separated from those of the remaining two species of *S. (Parasymmorphus)* by the presence of an unraised interocellar area, unreduced ocelli with maximum diameter of median ocellus 1.25 trans-scutal sulcus length, occipital carina with posterior margin incised by two submedial depressions, medially obsolete notaulus, non-crenate metanotum, propodeum with short nearly horizontal superior shelf, relatively elongate narrow metasomal tergum 1 with medial postcarinal length 0.73 apical width and with short depressed apical margin, metasomal sternum 1 with impunctate polished apex, base of metasomal segment 2 with tergum obtusely angulate in profile and sternum abruptly truncate posteriad of basal sulcus (see Soika, 1941: fig. 21-3), slightly sparser medial foveolate punctation on metasomal segment 2, and entirely black coloration (except small white interantennal spot and narrow medially interrupted white border on metasomal tergum 1).

Geographical distribution. — The holotype lacks locality labels, but was described from Sikkim. A second female of the same species from Shillong (Assam), reported on by Bequaert (1928) and Giordani Soika (1941), can no longer be located in the collection of the British Museum.

S. (Parasymmorphus) momunganensis (Schulthess)

Odynerus (Symmorphus) momunganensis Schulthess, 1934.

Material examined. — Holotype: female labelled "Momungan/Mindanao" [Entomologisches Institut, E.T.H., Zürich]. Additional material: 1 female labelled "Kolambugan/Mindanao/Baker" [USNM].

Diagnosis. — Specimens of *S. momunganensis* can be differentiated from those of *S. parvilineatus* by presence of a raised interocellar area vertically elevated directly posteriad of anterior ocellus, reduced ocelli with maximum diameter of median ocellus 0.89 trans-scutal sulcus length, occipital carina without submedial incisions, complete medially faint notaulus, nearly crenate metanotum, propodeum without superior shelf medially, broad metasomal tergum 1 with medial postcarinal length 0.50 to 0.56 apical width (fig. 1e) and without depressed apical margin, metasomal sternum 1 with uniform punctation to apex, base of metasomal segment 2 with tergum gradually rounded in profile and sternum strongly convex posteriad of basal sulcus (fig. 1d), uniform foveolate major punctation on metasomal segment 2, and black coloration with yellow maculation. *S. momunganensis* differs from *S. negrosensis* in possessing a medially raised pronotal carina (fig. 1b), somewhat apically truncate valvula and broad less elongate posterolateral projection of submarginal carina (fig. 1c), metasomal tergum 1 with sides slightly

Onder redactie van de secretaris, Postbus 9517, 2300 RA Leiden

118e WINTERVERGADERING, 22 FEBRUARI 1986, aanvang 11.00 uur

Wordt het weer zo boeiend van begin tot eind, zo vol wetenswaardigheden, zo vol oude en nieuwe kontakten, als in voorgaande jaren? Aan u het antwoord. Natuurlijk, om die sfeer weer te proeven kunt u een Jaarboekje opslaan en vergaderingsverslagen lezen. Maar wat gaat boven een "live" bijeenkomst waarin u actief en passief participeert? Komt en brengt uw mededelingen (met of zonder dia's) naar voren of luistert naar die van anderen op bovenvermelde dag en tijd in:

Cultureel- en Congrescentrum De Reehorst, Bennekomseweg 24, Ede.

Dit centrum ligt vlak bij het NS-station.

Lunch. De lunch kan gemeenschappelijk gebruikt worden, indien u bij binnenkomst aan de balie lunchbonnen koopt (f12,75 voor soep, 2 broodjes, krentebol en koffie/thee/melk). Er wordt uitgegaan van eenzelfde aantal eters als vorig jaar. Mochten er te weinig bonnen zijn, dan kunnen niet-bonnenbezitters in het gewone restaurant van het centrum lunchen.

141e ZOMERVERGADERING, 6-8 JUNI 1986

Het is maar goed, dat goede wijn geen krans behoeft, want veel ruimte om de plaats van de zomervergadering aan te prijzen heb ik niet in dit nummer van Verenigingsnieuws. Als ik "Twente" zeg, hoor ik al van heimwee zware zuchten uit entomologekeken. En als ik dan "De Lutte" zeg, sluiten de ogen zich en krioelen insecten zonder tal over de binnenzijde van de oogleden. En dan te weten, dat het geen droom is! Komt het in werkelijkheid bekijken. Wij zorgen voor prima onderdak in:

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Dit hotel ligt tussen Oldenzaal en De Lutte in, ongeveer twee kilometer buiten Oldenzaal.

Alle kamers zijn voorzien van toilet en douche of bad. De prijzen zijn als volgt:

- 1-pers. kamer - logies met ontbijt f 60,--, vol pension f 94,-- per nacht
- 2-pers. kamer - logies met ontbijt f 78,-- tot f 99,--, vol pension f 146,-- tot f 167,-- per 2 personen per nacht.

OPGAVE. Stuurt u onderstaand strookje ingevuld terug aan het secretariaat en wel, in verband met de te maken reserveringen, vóór 20 februari 1986.

Ondergetekende geeft zich op voor de 141e Zomervergadering en verzoekt om de aangegeven reserveringen:

Naam
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- 1. dag van aankomst dag van vertrek
- 2. 1-pers. kamer / 2-pers. kamer (doorhalen wat niet verlangd wordt)
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BESTUURSWISSELING

In april treedt P. Oosterbroek reglementair af als bestuurslid. Hij is niet herkiesbaar. Ter vervulling van de vakature stelt het bestuur het volgende dubbel-tal:

1. A.P.J.A. Teunissen
2. J. van Tol

Elke tien leden kunnen schriftelijk andere kandidaten voorstellen onder overlegging van een bereidverklaring van de voorgestelde kandidaat. Dit voorstel moet uiterlijk vier weken voor de Lentevergadering bij het secretariaat binnen zijn, dat wil zeggen vóór 26 maart 1986.

WERKKAMP 1986 TE MONT RIGI (ARDENNEN)

In het verleden is door de vereniging al vaker dankbaar gebruik gemaakt van de gastvrijheid van het veldstation van de Luikse universiteit op het Hoge Ven in de Ardennen. Jammer genoeg waren er in 1985 te weinig opgaven op tijd binnen om een excursie als verenigingsactiviteit te doen doorgaan. Een klein groepje heeft toen het heft in eigen hand genomen en is op eigen gelegenheid gegaan. Dit jaar proberen we het opnieuw als verenigingsactiviteit te organiseren. Omdat het door de landelijke vakantiespreiding moeilijk is bij voorbaat een datum te kiezen waarop ieder een kan, verzoeken wij potentiële deelnemers ons vóór 15 april mee te delen tijde welke weekeinden zij mee willen, eventueel ook in welke perioden zij zeker niet kunnen. U begrijpt, hoe meer data, des te meer mogelijkheden een voor velen geschikt weekeinde te vinden. Wij sturen u dan zo snel mogelijk bericht over de definitieve regeling. Opgaven aan onderstaand adres:

Pierre Thomas, Rijksmuseum van Natuurlijke Historie, Postbus 9517,
2300 RA Leiden.

SECTIE TOEGEPASTE ENTOMOLOGIE

Erratum. Lezingendag op het Centraal Diergeneeskundig Instituut te Lelystad op 7 februari 1986. Melden voor de lunch en verzoeken om inlichtingen bij de heer F.H.M. Borgstede, juiste adres: Edelhertweg 15, juiste tel.nr.: (03200) 73911.

Secretariaatsoverdracht. Met ingang van 1986 is het secretariaat van de Sectie overgenomen door mevr. Dr. S.A. Ulenberg, p/a Plantenziektenkundige Dienst te Wageningen, tel. nr. (08370) 19001.

J. Woets, oud-secr.

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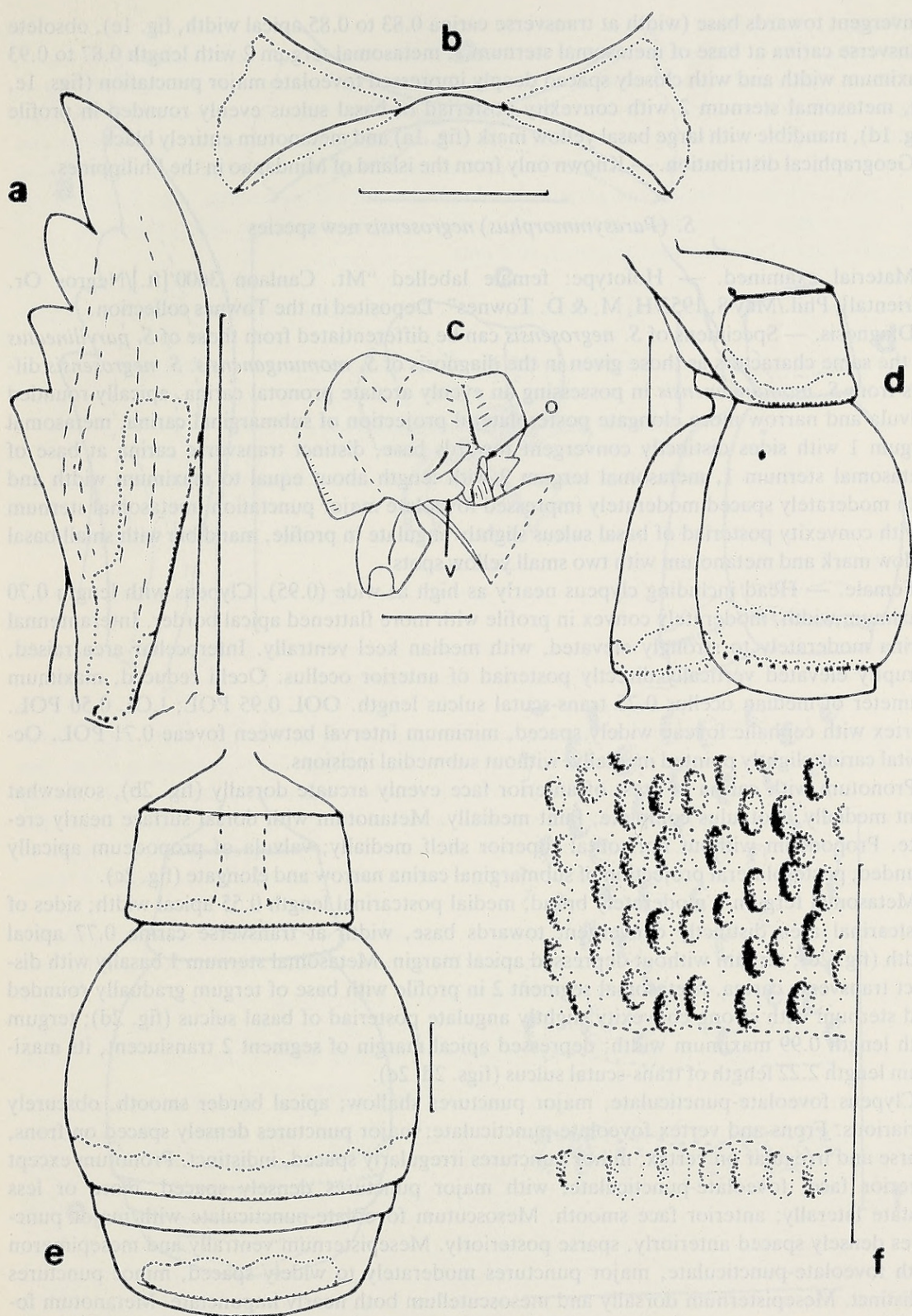


Fig. 1. *Symmorphus (Parasymmorphus) momunganensis* (Schulthess), female. a, right mandible; b, anterior face of pronotum; c, posterolateral view of propodeum, o = orifice, v = valvula; d, lateral view of metasomal segments 1-2; e, dorsal view of metasomal terga 1-3; f, apex of metasomal tergum 2. Scale bars = 1.0 mm.

convergent towards base (width at transverse carina 0.83 to 0.85 apical width, fig. 1e), obsolete transverse carina at base of metasomal sternum 1, metasomal tergum 2 with length 0.87 to 0.93 maximum width and with closely spaced deeply impressed foveolate major punctation (figs. 1e, 1f), metasomal sternum 2 with convexity posteriad of basal sulcus evenly rounded in profile (fig. 1d), mandible with large basal yellow mark (fig. 1a) and metanotum entirely black.

Geographical distribution. — Known only from the island of Mindanao in the Philippines.

S. (Parasymmorphus) negrosensis new species

Material examined. — Holotype: female labelled "Mt. Canlaon 3600'[ft.]/Negros Or. [Oriental], Phil./May 8, 1953/H, M, & D. Townes". Deposited in the Townes collection.

Diagnosis. — Specimens of *S. negrosensis* can be differentiated from those of *S. parvilineatus* by the same characters as those given in the diagnosis of *S. momunganensis*. *S. negrosensis* differs from *S. momunganensis* in possessing an evenly arcuate pronotal carina, apically rounded valvula and narrow more elongate posterolateral projection of submarginal carina, metasomal tergum 1 with sides distinctly convergent towards base, distinct transverse carina at base of metasomal sternum 1, metasomal tergum 2 with length about equal to maximum width and with moderately spaced moderately impressed foveolate major punctation, metasomal sternum 2 with convexity posteriad of basal sulcus slightly angulate in profile, mandible with small basal yellow mark and metanotum with two small yellow spots.

Female. — Head including clypeus nearly as high as wide (0.95). Clypeus with length 0.70 maximum width, moderately convex in profile with more flattened apical border. Interantennal carina moderately to strongly elevated, with median keel ventrally. Interocellar area raised, abruptly elevated vertically directly posteriad of anterior ocellus. Ocelli reduced, maximum diameter of median ocellus 0.75 trans-scutal sulcus length. OOL 0.95 POL; LOL 0.50 POL. Vertex with cephalic foveae widely spaced, minimum interval between foveae 0.71 POL. Occipital carina slightly pointed medially, without submedial incisions.

Pronotum with carina at crest of anterior face evenly arcuate dorsally (fig. 2b), somewhat faint medially. Notaulus complete, faint medially. Metanotum with dorsal surface nearly crenate. Propodeum without horizontal superior shelf medially; valvula of propodeum apically rounded, posterolateral projection of submarginal carina narrow and elongate (fig. 2c).

Metasomal tergum 1 moderately broad, medial postcarinal length 0.55 apical width; sides of postcarinal area distinctly convergent towards base, width at transverse carina 0.77 apical width (fig. 2e); tergum without depressed apical margin. Metasomal sternum 1 basally with distinct transverse carina. Metasomal segment 2 in profile with base of tergum gradually rounded and sternum with strong convexity slightly angulate posteriad of basal sulcus (fig. 2d); tergum with length 0.99 maximum width; depressed apical margin of segment 2 translucent, its maximum length 2.22 length of trans-scutal sulcus (figs. 2d, 2e).

Clypeus foveolate-punctulate, major punctures shallow; apical border smooth, obscurely coriarius. Frons and vertex foveolate-punctulate; major punctures densely spaced on frons, sparse and irregular on vertex; minor punctures irregularly spaced, indistinct. Pronotum except anterior face, foveolate-punctulate, with major punctures densely spaced, more or less costate laterally; anterior face smooth. Mesoscutum foveolate-punctulate with major punctures densely spaced anteriorly, sparse posteriorly. Mesepisternum ventrally and mesepimeron both foveolate-punctulate, major punctures moderately to widely spaced, minor punctures indistinct. Mesepisternum dorsally and mesoscutellum both nearly impunctate. Metanotum foveate dorsally, obscurely imbricate ventrally. Propodeum rugose laterally, areolate-rugose dorsally; posterior face nearly smooth, with some shallow indistinct rugosity and obscure imbricate subsculpture. Metasomal tergum 1 and sternum 1 each with postcarinal area foveolate-punctulate to foveate-punctulate, major punctures moderately dense. Segment 2 foveolate-punctulate; major punctures uniformly distributed, moderately spaced and impressed (fig. 2f); minor punctures obscure medially on sternum 2. Segments 3 to 6 with imbricate subsculpture.

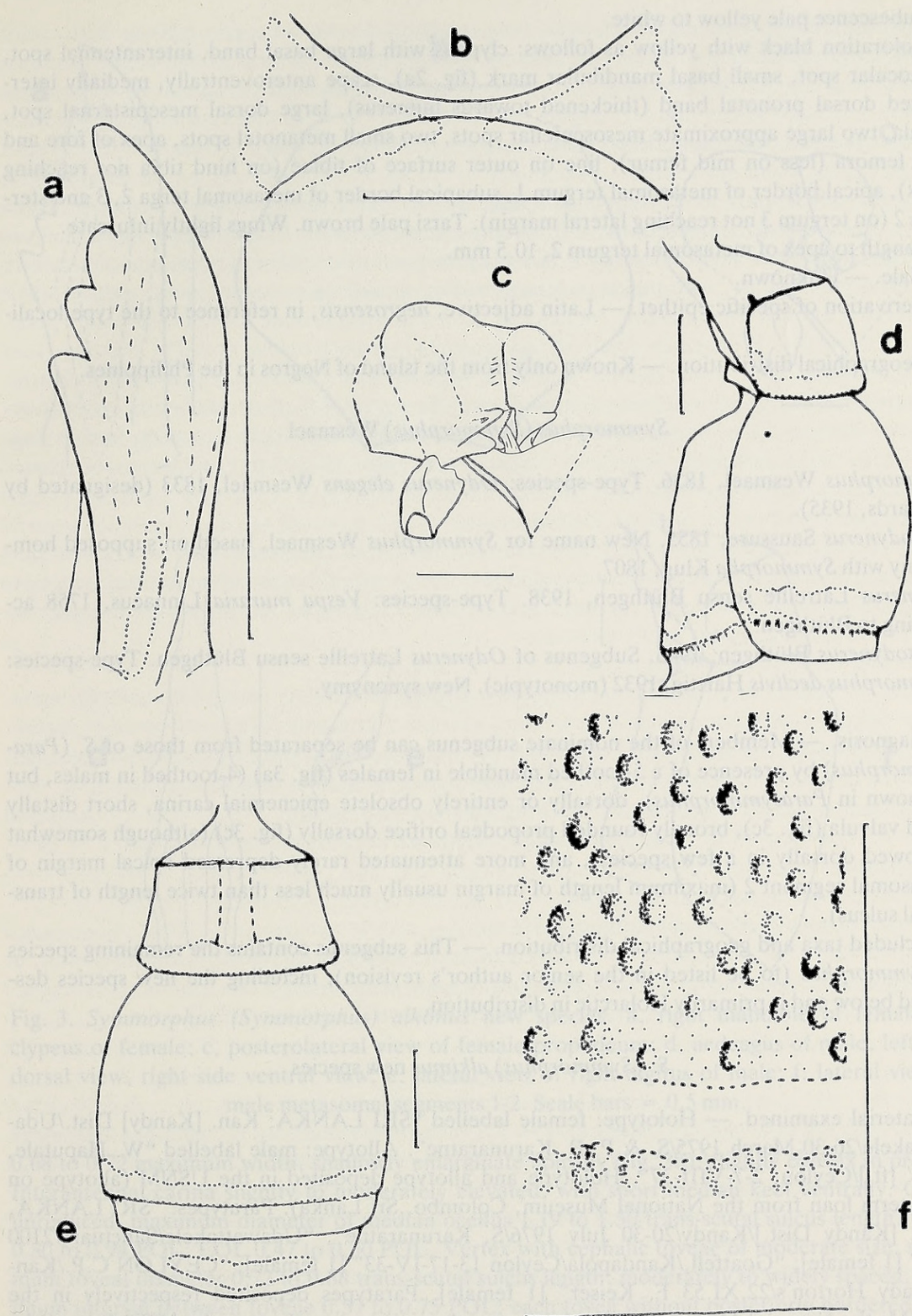


Fig. 2. *Symmorphus (Parasymmorphus) negrosensis* new species, female. a, right mandible; b, anterior face of pronotum; c, posterolateral view of propodeum; d, lateral view of metasomal segments 1-2; e, dorsal view of metasomal terga 1-3; f, apex of metasomal tergum 2. Scale bars = 1.0 mm.

Pubescence pale yellow to white.

Coloration black with yellow as follows: clypeus with large basal band, interantennal spot, postocular spot, small basal mandibular mark (fig. 2a), scape anteroventrally, medially interrupted dorsal pronotal band (thickened towards humerus), large dorsal mesepisternal spot, tegula, two large approximate mesoscutellar spots, two small metanotal spots, apex of fore and mid femora (less on mid femur), line on outer surface of tibiae (on hind tibia not reaching apex), apical border of metasomal tergum 1, subapical border of metasomal terga 2, 3 and sternum 2 (on tergum 3 not reaching lateral margin). Tarsi pale brown. Wings lightly infusate.

Length to apex of metasomal tergum 2, 10.5 mm.

Male. — Unknown.

Derivation of specific epithet. — Latin adjective, *negrosensis*, in reference to the type locality.

Geographical distribution. — Known only from the island of Negros in the Philippines.

Symmorphus (*Symmorphus*) Wesmael

Symmorphus Wesmael, 1836. Type-species: *Odynerus elegans* Wesmael, 1833 (designated by Richards, 1935).

Protodynerus Saussure, 1855. New name for *Symmorphus* Wesmael, based on supposed homonymy with *Symmorpha* Klug, 1807.

Odynerus Latreille sensu Blüthgen, 1938. Type-species: *Vespa muraria* Linnaeus, 1758 according to Blüthgen.

Koptodynerus Blüthgen, 1943. Subgenus of *Odynerus* Latreille sensu Blüthgen. Type-species: *Symmorphus declivis* Harttig, 1932 (monotypic). New synonymy.

Diagnosis. — Members of the nominate subgenus can be separated from those of *S.* (*Parasymmorphus*) by presence of a 5-toothed mandible in females (fig. 3a) (4-toothed in males, but unknown in *Parasymmorphus*), dorsally or entirely obsolete epicnemial carina, short distally fused valvula (fig. 3c), broadly rounded propodeal orifice dorsally (fig. 3c) (although somewhat narrowed dorsally in a few species), and more attenuated rarely depressed apical margin of metasomal segment 2 (maximum length of margin usually much less than twice length of transscutal sulcus).

Included taxa and geographical distribution. — This subgenus contains the remaining species of *Symmorphus* (to be listed in the senior author's revision), including the new species described below and is primarily Holarctic in distribution.

S. (*Symmorphus*) *alkimus* new species

Material examined. — Holotype: female labelled "SRI LANKA: Kan. [Kandy] Dist./Udawattakele/26-30 March 1975/S. & P. B. Karunaratne". Allotype: male labelled "W. Haputale, 6000' [ft.]/Ceylon, 2-7-VIII-37". Holotype and allotype deposited in the USNM (allotype on long term loan from the National Museum, Colombo, Sri Lanka). Paratypes: "SRI LANKA, Kan. [Kandy Dist.]/Kandy/20-30 July 1976/S. Karunaratne", "Udawattakele/Sanctuary/2100 feet" [1 female]; "Goatfell,/Kandapola/Ceylon 13-17-IV-33" [1 female]; "CEYLON C.P./Kandy/Lady Horton's/22.XI.53 F. Keiser" [1 female]. Paratypes deposited respectively in the USNM; the National Museum, Colombo (currently on long term loan to the USNM); and the Naturhistorisches Museum, Basel, Switzerland.

Diagnosis. — Specimens of this species can be differentiated from all other known *S.* (*Symmorphus*) by the combination of a non-incised occipital carina, nearly vertical metanotum, broad metasomal tergum 1, base of metasomal segment 2 with tergum obtusely angulate and sternum abruptly truncate, depressed apical margin of metasomal segment 2, and absence of yellow on mesosoma.

Female. — Head including clypeus nearly as high as wide (0.92 to 0.96). Clypeus with length



Cumming, Jeffrey M. and Vecht, J. van der. 1986. "New Oriental species of *Symmorphus* Wesmael, with description of a new subgenus (Hymenoptera: Vespidae, Eumeninae) ." *Entomologische berichten* 46(2), 23–32.

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