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Vervoortihelcon, a new genus of the subfamily Helconinae Foerster (Hymenoptera: Braconidae) from Chile

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A new genus of the tribe Helconini Foerster (Braconidae: Helconinae), *Vervoortihelcon* (type species: *Vervoortihelcon scaramozzinoi* spec. nov.) from Chile is described and illustrated. The new subtribe Vervoortihelconina is named to include the new genus.

Introduction

Dr P.L. Scaramozzino (Turin) was so kind as to donate several interesting Braconidae to me and among these I found an extremely peculair and undescribed genus from Chile. In my key to the subfamilies of Braconidae (van Achterberg, 1993, 1997) it runs to the subfamily Helconinae Foerster, 1862. This is obviously correct but it does not resemble any known genus of the Helconinae. Therefore, a new subtribe (Vervoortihelconina) is named to receive the new genus. The biology of the new genus is unknown, but the available data on the biology of the tribe Helconini indicate that they are solitary koinobiont endoparasites of larval Coleoptera in wood (especially Cerambycidae).

For the identification of the subfamily Helconinae see van Achterberg (1990, 1993, 1997), and for the tribes and genera of New World Helconinae, see Sharkey (1997). Peculiarly enough the key to the tribes by Sharkey (1997) is not construed to identify the genus *Eumacrocentrus* Ashmead, 1900, which also is not closely related to the genus *Helcon* Nees, 1814, as is suggested, because of the lack of synapomorphies to justify this suggestion. For the terminology used in this paper see van Achterberg (1988, 1993).

Systematics

Subfamily Helconinae Foerster, 1862
Tribe Helconini Foerster, 1862
Subtribe Vervoortihelconina nov.

Diagnosis.— Second-fifth metasomal tergites immovably joined, laterally with subvertical crenulate sides (fig. 5), fifth tergite triangularly closed apically (figs 9, 14), metapleuron with pair of tubercles above hind coxa (fig. 5), fourth and fifth metasomal tergites with medio-posterior tubercle (fig. 5), and frons with large free-standing

tooth (figs 2, 10). These character-states are autapomorphies within the tribe Helconini. Contains one genus: *Vervoortihelcon* gen. nov.

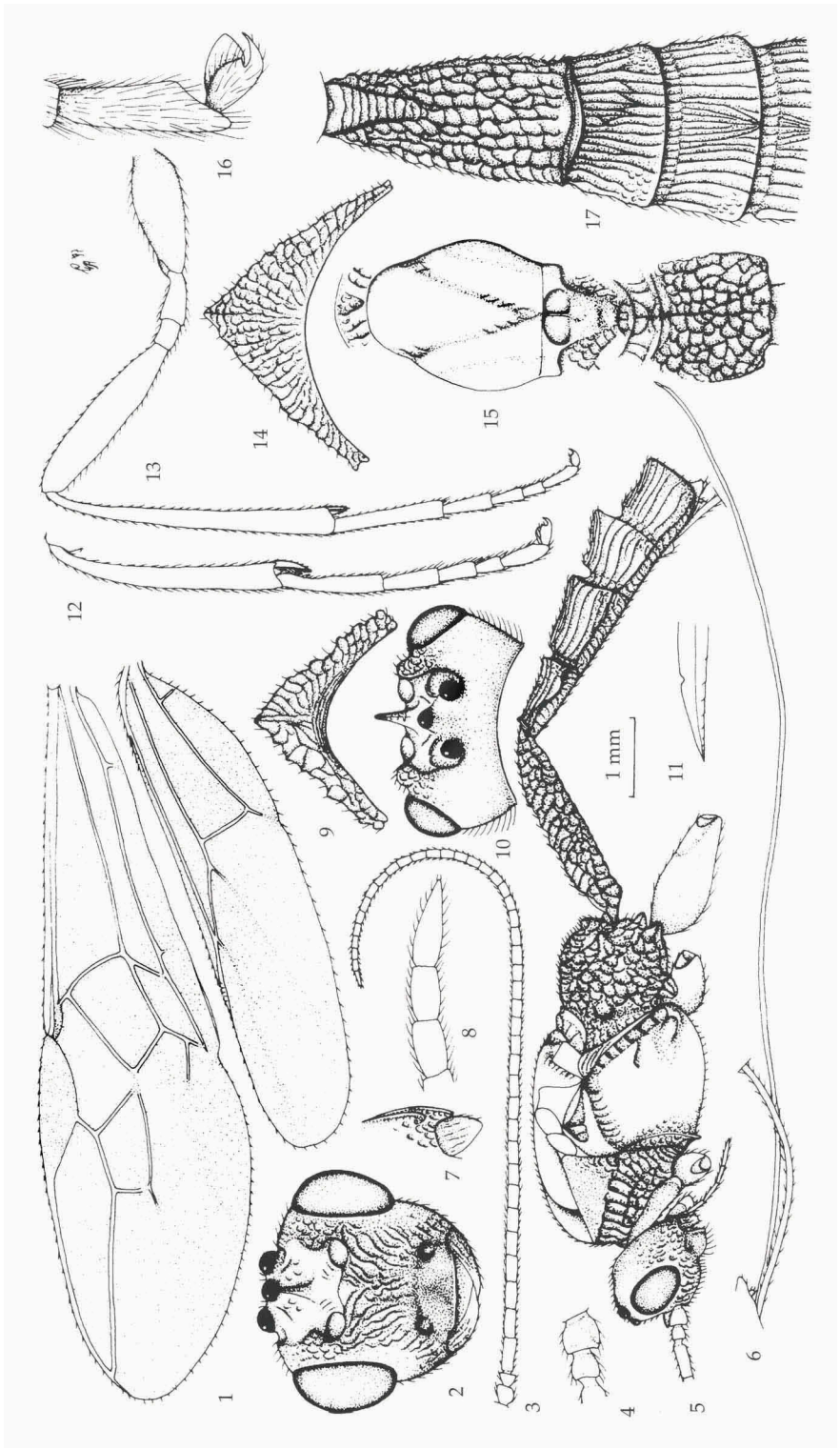
Distribution.— Neotropical (Chile).

Vervoortihelcon gen. nov.
(figs 1-17)

Type species: *Vervoortihelcon scaramozzinoi* spec. nov.

Etymology.— Named in honour of Prof. Dr W. Vervoort, the former director of the Rijksmuseum van Natuurlijke Historie, Leiden, in commemoration of his 80th birthday. The second part of the name is derived from the generic name *Helcon* Nees, 1814, because it belongs to the tribe Helconini. Gender: masculine.

Diagnosis.— Length of fore wing 8.2-9.0 mm, of body 11.0-11.8 mm; antennal segments about 43, apical segment without spine (fig. 8); length of antenna slightly longer than fore wing; apex of scapus truncate, and pedicellus somewhat narrowed basally (fig. 4); antennal sockets situated near middle level of eyes (fig. 5), and their outer sides not protruding (fig. 10); maxillary and labial palpi with 6 and 4 segments, respectively; occipital carina nearly complete, remaining removed from hypostomal carina, and absent only near hypostomal carina absent (fig. 7); occipital flange normal; frons with large free-standing horn, not connected to median carina or lamella (figs 2, 5, 10); malar suture shallow; hypoclypeal depression distinct because labrum is slanted backwards (fig. 2); antescutal depression absent; pronope normal, triangular (fig. 15); prepectal carina complete, strong and reaching middle level of pronotal side (fig. 5); precoxal sulcus absent or nearly so; mesosternal sulcus complete; mesoscutum with notauli present, reduced medially, no medio-posterior median groove (fig. 15); scutellum with wide subposterior crenulate depression, but posteriorly narrowly smooth (fig. 15); median carina of metanotum present anteriorly, not protruding dorsally (figs 5, 15); propodeal areola absent, only anteriorly with median carina (fig. 15); propodeum without pile of reflective setae; propodeal tubercles absent, but metapleuron with pair of tubercles above base of hind coxa (fig. 5); veins 1-SR and r-m of fore wing present; vein 2-SR of fore wing straight; vein m-cu of fore wing shortly antefurcal (fig. 1), angled with vein 2-CU1 and converging to vein 1-M posteriorly (fig. 1); veins 2A and a of fore wing present, but mainly unsclerotised, and only pigmented; vein 3-SR of fore wing shorter than vein 2-M (fig. 1); vein CU1b of fore wing present (fig. 1); vein cu-a of fore wing strongly inclivous; vein 2A of hind wing nearly completely sclerotised (fig. 1); hind wing with 5 hamuli; marginal cell of hind wing narrow, parallel-sided apically (fig. 1); vein SR of hind wing straight basally and unsclerotized; vein 1r-m of hind wing long and oblique; vein M+CU of hind wing much longer than vein 1-M; tarsal claws with indistinct lobe (fig. 16); fore and middle tibiae without short pegs; femora rather slender (fig. 13); hind femur smooth ventrally, without ventral tooth or crest; fore tarsus normal (fig. 12); inner hind tibial spur wide, similar in width to outer spur, but somewhat longer; first tergite distinctly inserted above base of hind coxa (fig. 5), not inflated basally and slender, movably joined to second tergite, without dorsope, its dorsal carinae present at basal third, reduced posteriorly (fig. 17); second tergite with transverse basal rim (figs 5, 17); second-fifth metasomal tergites immovably joined, sculptured, laterally with subvertical



Figs 1-17, *Vervoortihelcon scaramozzinoi* gen. nov. & spec. nov., ♀, holotype, but 9 of ♂ paratype. 1, wings; 2, head, frontal aspect; 3, antenna; 4, scapus and pedicellus; 5, habitus, lateral aspect; 6, ovipositor; 7, detail of ventral part of occipital carina; 8, apex of antenna; 9, 14, apex of fifth metasomal tergite, posterior aspect; 10, head, dorsal aspect; 11, apex of ovipositor; 12, fore tibia and tarsus; 13; hind leg; 15, mesosoma, dorsal aspect; 16, outer hind claw; 17, first-third metasomal tergites, dorsal aspect. 1, 3, 5, 6, 13: 1.0 × scale-line; 2, 4, 7, 10, 12: 2.0 ×; 9, 14: 2.6 ×; 8, 11, 16: 5.0 ×; 15, 17: 1.2 ×.

crenulate sides and with sharp lateral crease (fig. 5); fifth tergite triangularly closed apically (figs 9, 14); fourth and fifth metasomal tergites with medio-posterior tubercle (fig. 5); hypopygium of female rather small, and apically truncate; length of ovipositor sheath about 1.4 times fore wing.

Distribution.— Neotropical (Chile).

Note.— In Sharkey's key to the New World genera of the Helconini (Sharkey, 1997) *Vervoortihelcon* should be inserted at the beginning because of the joined second-fifth metasomal tergites (fig. 5), and the triangularly closed apex of the fifth tergite (figs 9, 14).

Vervoortihelcon scaramozzinoi spec. nov.
(figs 1-17)

Material.— Holotype, ♀ (RMNH), "Chile, Valdivia, Sto Domingo, Prov. Valdivia, 29.xi.[19]84, E. Krahmer". Paratype: 1 ♂ (RMNH), same data, but 28.xi.1984.

Holotype, ♀, length of fore wing 9.0 mm, of body 11.0 mm.

Head.— Antennal segments 43, length of third segment 1.2 times fourth segment, length of third, fourth and penultimate segments 3.0, 2.4, and 1.9 times their width, respectively (figs 3, 8); length of maxillary palp 0.9 times height of head; length of eye in dorsal view as long as temple (fig. 10); OOL:diameter of ocellus:POL = 18:9:18; frons largely smooth, except for some coarse punctures, and flat medially, laterally convex and rugose (figs 2, 10); vertex rather flat, with distinct triangular depression beside lateral ocellus, mainly smooth and densely setose (fig. 10); face flattened and very coarsely rugose medially and laterally narrowly punctulate (fig. 2); clypeus densely finely punctate and convex but medio-ventrally with a triangular depression (fig. 2), its ventral margin distinctly differentiated; length of malar space 1.8 times basal width of mandible; mandible slightly twisted apically, robust, dorsal tooth slightly longer than ventral tooth.

Mesosoma.— Length of mesosoma 1.9 times its height; laterally pronotum largely densely finely punctate dorsally, and very coarsely crenulate-rugose ventrally; propleuron mainly flattened and long blackish setose; epicnemial area coarsely crenulate dorsally; mesopleuron smooth; pleural sulcus coarsely crenulate; metapleuron very coarsely reticulate, except anteriorly (fig. 5); notauli complete, medially smooth and narrow, basally and posteriorly crenulate (fig. 15); mesoscutal lobes largely smooth, rather flat and densely setose; scutellum punct(ul)ate, and mainly flat (fig. 15); surface of propodeum very coarsely cellulate, its median carina present in anterior third, becoming irregular posteriorly (fig. 15).

Wings.— Fore wing: r:3-SR:SR1 = 5:14:43; 1-CU1:2-CU1 = 5:33; 2-SR:3-SR:r-m = 13:14:9. Hind wing: M+CU:1-M = 42:6; 2-SC+R very short (fig. 1).

Legs.— Hind coxa smooth; tarsal claws robust, setose medio-ventrally (fig. 16); length of femur, tibia and basitarsus of hind leg 4.7, 11.4 and 8.0 times their width, respectively; length of hind tibial spurs 0.15 (outer) and 0.20 (inner) times hind basitarsus; length of fore tarsus 1.2 times fore tibia.

Metasoma.— Length of first tergite 1.9 times its apical width, its surface very coarsely cellulate and its dorsal carinae converging in basal fifth of tergite (fig. 17);

dorsope absent; second and third metasomal sutures deep and finely crenulate, fourth suture comparatively shallow; second-fifth tergites (largely) very coarsely longitudinally costate, medially densely and obliquely striate towards medio-posterior tubercles, with sharp lateral crease; fourth and fifth tergites with distinct tubercle medio-posteriorly; fifth tergite with triangular posterior enclosure, sculptured (fig. 14); length of ovipositor sheath 1.38 times fore wing; ovipositor very densely setose.

Colour.— Black; fore and middle legs (except black coxae), hind trochanter and trochantellus, apex of hind femur, hind tibia and tarsus, ovipositor sheath, palpi, veins of basal half of fore wing, pterostigma, and parastigma dark brown; veins 2-M, 3-SR, 1-R1 and SR1 of fore wing pale brownish, remainder of veins brown; hind coxa and remainder of hind femur brownish-(orange)yellow; wing membrane dark brown.

Variation.— Antenna of ♂ incomplete; length of fore wing 8.2 mm , of body 11.8 mm; length of first tergite 2.1 times its apical width; second-fifth metasomal tergites with tubercle medio-posteriorly, further details as holotype.

Note.— Named in honour of the hymenopterist Dr Pier Luigi Scaramozzino (Turin) for his efforts to enlarge our knowledge of the Braconidae of Italy and other areas.

Acknowledgements and abbreviations

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RMNH stands for the Nationaal Natuurhistorisch Museum, Leiden.

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