

**FIRST RECORD OF THE GENUS *Sulorgilus* van Achterberg
(Hymenoptera: Braconidae: Orgilinae) FROM VIETNAM AND CHINA,
WITH DESCRIPTION OF A NEW SPECIES**

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ABSTRACT: *Sulorgilus* van Achterberg, 1994, is recorded for the first time from Vietnam and China. It is a monotypic genus of the subfamily Orgilinae (Hymenoptera: Braconidae) with one species described from Sulawesi (Indonesia). A new species, *Sulorgilus devriesi* Long & van Achterberg, sp. n., is described and illustrated. A key to the species of the genus *Sulorgilus* is added.

Keywords: Hymenoptera, Braconidae, Orgilinae, *Sulorgilus*, new record, new species, Oriental, Vietnam, China, Indonesia.

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INTRODUCTION

The subfamily Orgilinae Ashmead, 1900 (Hymenoptera: Braconidae) is a rather small and rarely collected subfamily with 356 species in 13 genera [13]. The few data known on the biology of Orgilinae indicate that Orgilinae are solitary koinobiont endoparasitoids of concealed lepidopterous larvae. Morphologically, the relationship of the Orgilinae with the Microtypinae is analyzed by van Achterberg (1992b) [4].

Up to now, two genera of the subfamily Orgilinae occur in Vietnam: *Orgilonia* van Achterberg, 1987, and *Stantonia* Ashmead, 1904, with eight recorded species [11, 12], of those only one species, *Orgilonia ashmeadi* (Viereck, 1911) was recorded with host information. It is reported as a parasitoid of the rice leaf folder, *Cnaphalocrocis medinalis* Guénee (Pyralidae), which is a serious pest of paddy rice in Vietnam [12] and China. The newly recorded third genus, *Sulorgilus* van Achterberg, was established in 1994 for *Sulorgilus reclineris* van Achterberg, 1994, from Indonesia (Sulawesi) [5]. The genus is recorded for the first time for the fauna of

Vietnam and China.

MATERIALS AND METHODS

The Orgilinae specimens from Vietnam are in the collections of the Institute of Ecology & Biological Resources (IEBR) at Ha Noi, the Vietnam National Museum of Nature (VNMN) at Ha Noi and the Naturalis Biodiversity Center (RMNH) at Leiden. They were assembled by the authors during numerous expeditions in Vietnam. The specimen from China is deposited in the Institute of Zoology, Chinese Academy of Sciences (IZAS) at Beijing.

Terminology used in this paper follows van Achterberg (1993) [4], and sculpture terms are based on Harris (1979)[10]. For the identification of the genera of Orgilinae see van Achterberg (1994) [5]; for additional references and data, see Yu et al. (2016)[13]. The photographs were made with a Canon G15 camera attached to a Olympus®SZ61 binocular microscope at IEBR and processed with Adobe Photoshop CS5 to adjust the size and background. The following abbreviations are used: OD=diameter of posterior ocellus, OOL=ocular-ocellar line, POL=postocellar line,

'Orgi.+number'=code number indexing for specimens of the Orgilinae in the collection, MT=Malaise trap, NE=northeast, VAST stands for Vietnam Academy of Science and Technology. The scale-lines of the plates indicate mm.

Sulorgilus van Achterberg, 1994

Sulorgilus van Achterberg, 1994: 175. Type-species *Sulorgilus reclinervis* van Achterberg, 1994.

Diagnosis: Head comparatively small (compared to mesosoma) (fig. 1, and see fig. 17 in van Achterberg, 1994); clypeus normal, truncate ventrally (figs 3, 7); occipital carina strong laterally, up to upper level of eye (fig. 3); frons deeply concave and largely smooth medially (fig. 2); malar suture absent; mandible slender basally, strongly twisted apically and outer tooth distinctly longer than inner tooth, robust (fig. 7). Mesosoma robust, its length of about 1.2 times its height (fig. 4, and see fig. 17 in van Achterberg, 1994); dorsal pronope round, rather small and deep (see fig. 23 in van Achterberg, 1994); prepectal carina completely absent (fig. 4); precoxal sulcus wide and shallow, coarsely punctate, partly reticulate-punctate (fig. 4); notauli complete, narrow, finely crenulate or punctate, posteriorly more or less flat (fig. 5) or narrowly depressed (see fig. 23 in van Achterberg, 1994); mesoscutum densely setose, very densely and coarsely

punctate, punctures nearly touching each other; scutellum strongly convex, coarsely punctate (fig. 5); scutellar sulcus deep, without strong carinae (fig. 5); propodeum without median carina anteriorly, and with medium-sized lamella posteriorly (see fig. 17 in van Achterberg, 1994); propodeal spiracle short elliptical (see fig 23 in van Achterberg, 1994). Fore wing: vein 1-SR absent and first discal cell comparatively robust (fig. 8); vein 1-M curved basally (fig. 8) or nearly straight (see fig. 14 in van Achterberg, 1994) ; vein r-m present; vein cu-a oblique or vertical, interstitial (fig. 8) or subinterstitial (see fig. 14 in van Achterberg, 1994); vein 2-M medium-sized; vein SR1 straight. Hind wing: vein M+CU longer than vein 1-M, plical lobe narrow; vein cu-a strongly reclivous, straight or near so (fig. 9, and see figs 14, 15 in van Achterberg, 1994). Legs: tarsal claws bifurcate (fig. 10); outer face of hind tibia bristly, with two pegs apically (fig. 11, and see fig. 24 in van Achterberg, 1994); coxa rather enlarged, outer side of hind coxa largely coarsely punctate; length of first tergite about 1.1-1.5 times its apical width (fig. 6), its dorsal carinae absent; second metasomal tergite largely smooth, without depressions; third tergite without sharp lateral crease; ovipositor with minute notch subapically; length of ovipositor sheath 0.7-0.9 times fore wing.

Biology. Unknown.

Distribution. Oriental.

Key to species of the genus *Sulorgilus* van Achterberg

- 1. Notauli rather long, convergent, united posteriorly near scutellar sulcus (fig. 28 in van Achterberg, 1994); vein 1-M of fore wing more or less straight, and vein CU1a of fore wing faintly sclerotized (fig. 14 in van Achterberg, 1994); first metasomal tergite about 1.5 times longer than wide apically (fig. 26 in van Achterberg, 1994). Indonesia.....***S. reclinervis*** van Achterberg, 1994
- Notauli short, parallel-sided anteriorly, united posteriorly far in front of scutellar sulcus and a flat area (fig. 5); vein 1-M of fore wing distinctly curved basally (fig. 8), and vein CU1a of fore wing largely sclerotized (fig. 8); first metasomal tergite about as long as wide apically (fig. 6). Vietnam, China.....***S. devriesi*** Long & van Achterberg, **sp. n.**

Description of species

***Sulorgilus devriesi* Long & van Achterberg, sp. n.** (Figs 1-11)

Material. Holotype, ♀ (VNMN), 'Orgi.058',

"NE. Vietnam: Thai Nguyen, Dai Tu, Phu Xuyen, orchard, MT, 21°39'N 105°32'E, 360 m, 20-30.ix.2007, K.D. Long". Paratypes: 1 ♀ (RMNH), "N. Vietnam: Viet Tri, n[ea]r Thanh Son, Thuong Cuu, 20°59'E 105°8'N, 350-400

m, 11-16.x.1999, Malaise traps, R. de Vries, RMNH'99"; 1 ♀ (IZAS), "[China:] Yunnan, Xishuangbanna, Mengla, 22.viii.1958, 1050-1,080 m, Wang Shu-yong".

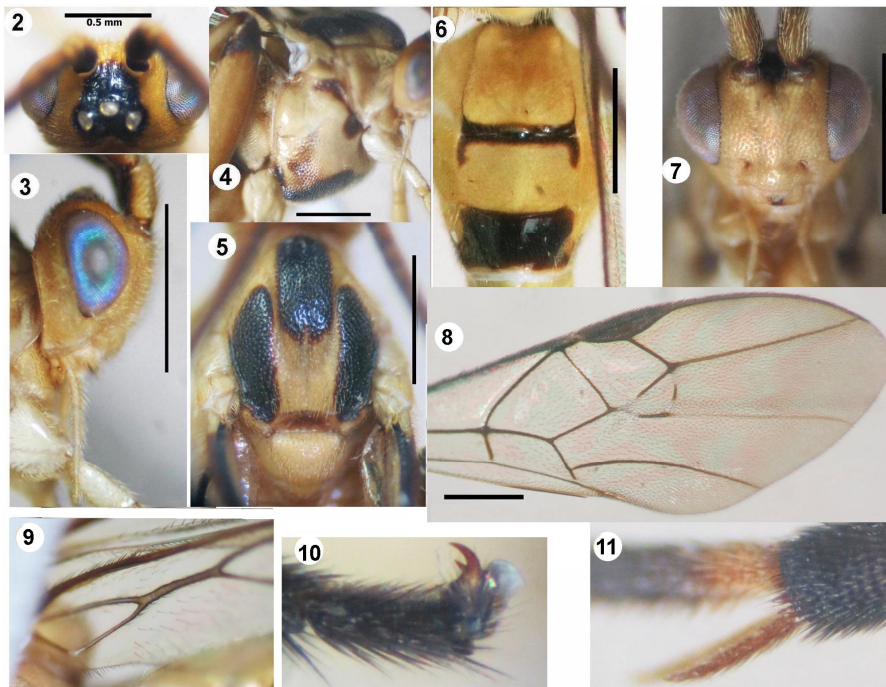
Description. Holotype, female, length of body 6.6 mm, length of fore wing 6.8 mm and length of ovipositor sheath 0.7 times as long as fore wing.

Head. Antenna with 45 segments, middle segments longer than wide (5:4), third and fourth segments 2.25 and 1.5 times as long as its width respectively (9:4, 6:4); penultimate antennal segment half as long as apical segment; apical segment with distinct spine; width of face equal to height of face and clypeus combined (fig. 7); maxillary palp 0.8 times as long as height of head; malar space 1.2 times as long as mandible width (6:5); clypeus nearly straight, distance between tentorial pits twice as long as distance between pits and eye margin (fig. 7); in anterior view eye twice as high as wide; in dorsal view length of eye 2.2

times as long as temple (11:5); POL:OD:OOL=6:3:6 (fig. 2); distance between front and hind ocelli:OOL =2:3; in lateral view eye 1.6 times wider than temple (fig. 3); face largely punctate and nearly rugose-punctate; clypeus distinctly punctate; vertex and temple mainly rugose-punctate.



Figure 1. *Sulorgilus devriesi* Long & van Achterberg, sp. n., holotype, female, habitus, lateral aspect.



Figures 2-11. *Sulorgilus devriesi* Long & van Achterberg, sp. n., holotype, female

2. Head, dorsal aspect; 3. Head, lateral aspect; 4. Mesopleuron; 5. Mesonotum; 6. First-third metasomal tergites, dorsal aspect; 7. Head, anterior aspect; 8. Fore wing; 9. Base of hind wing; 10. Hind tarsal claw; 11. Pegs on outer face of hind tibia apex.

Mesosoma. Length of mesosoma 1.1 times as long as high (48:42); notauli short and shallow, parallel-sided anteriorly, united posteriorly far in front of scutellar sulcus, in front of flat area (fig. 5); parallel-sided anteriorly, flat posteriorly and with sparse distinct punctures (fig. 5); middle and lateral lobes of mesoscutum largely punctures (fig. 5); scutellum with sparse distinct punctures; precoxal sulcus short, wide, shallow, largely rugose (fig. 4); area above precoxal sulcus smooth posteriorly, largely punctate anteriorly; area below precoxal sulcus distinctly densely punctate; metapleuron largely rugose-punctate; propodeum finely punctate.

Wings. Fore wing: pterostigma 3.7 times as long as wide (22:6); vein r:2-SR:3-SR+SR1=10:13:40; vein r arising near middle of pterostigma; vein cu-a interstitial (fig. 8); vein 1-M distinctly curved basally; vein CU1a largely sclerotized (fig. 8); vein CU1b:3-CU1=2:7 (fig. 8); vein M+CU:1-M:1r-m=22:16:20. Hind wing: vein M+CU slightly longer than robust vein 1-M; hind wing membrane sparsely setose but base and around vein cu-a glabrous (fig. 9).

Legs. Length of femur, tibia and basitarsus of middle leg 7.0, 9.0 and 12.0 times their width, respectively; inner and outer middle tibial spurs 0.6 and 0.4 times as long as middle basitarsus, respectively; length of femur, tibia and basitarsus of hind leg 3.6, 6.3 and 7.0 times as long as their width, respectively; hind inner and outer tibial spurs 0.5 and 0.4 times as long as basitarsus, respectively; inner side of hind basitarsus with special strong setae; outer face of hind tibial apex with two pegs (fig. 11); hind tarsal claw bifurcate (fig. 10).

Metasoma. First tergite rather short, 1.1 times as long as its apical width (20:18), its surface largely smooth (fig. 6); second suture fine; second tergite 1.3 times as long as third tergite; second-sixth tergite polished, smooth; length of ovipositor sheath 0.7 times as long as fore wing.

Colour. Pale yellow; basal third of antenna yellow (but scapus dark brown dorsally) and remainder light brown; frons medially,

stemmaticum, middle (except apex light yellow) and lateral lobes of mesoscutum, mesosternum black; fore legs light yellow, except telotarsus pale brown; middle legs light yellow, except trochanters and trochantellus ventrally, tibia and basitarsus apically, and second-fifth tarsal segments pale brown; hind coxa apically, trochanters and trochantellus, hind femur narrowly basally and apically, apical third of hind tibia, hind basitarsus (but with yellow basal ring) and second-fifth tarsal segments blackish brown; veins of fore wing light brown, sparsely pigmented basally but densely pigmented apically (fig. 8); first and second metasomal tergites yellow with blackish brown stripes at apex of first tergite and at base of second tergite; third tergite dark brown, yellow laterally and remainder light yellow. Paratype has frons, vertex and apex of hind coxa yellow, but paratype from Yunnan has frons and vertex more extensively darkened than holotype.

Male. Unknown

Distribution. NE Vietnam (Thai Nguyen); NW Vietnam (Viet Tri); China (Yunnan, Xishuangbanna).

Biology. Unknown

Etymology. The epithet refers to the collector of the paratype deposited in RMNH, The Netherlands, Mr. Robbert de Vries (Leiden) who had an important role in the fieldwork in Vietnam and in preparing the braconid specimens in RMNH.

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**GHI NHẬN MỚI GIỐNG *Sulorgilus* van Achterberg
(Hymenoptera: Braconidae: Orgilinae) TỪ VIỆT NAM VÀ TRUNG QUỐC
VỚI MÔ TẢ MỘT LOÀI MỚI CHO KHOA HỌC**

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TÓM TẮT

Sulorgilus van Achterberg, 1994 là một giống hiếm gặp, thuộc họ ong ký sinh Braconidae, phân họ Orgilinae. Giống này được chi định trên mẫu chuẩn loài (type-species) *Sulorgilus reclinervis* van Achterberg, 1994 từ Indonesia (Sulawesi). Trong bài này, lần đầu tiên ghi nhận giống *Sulorgilus* từ khu hệ ong ký sinh ở Việt Nam và Trung Quốc với mô tả 1 loài mới cho khoa học, đó là *Sulorgilus devriesi* Long & van Achterberg, sp. n. Ngoài những đặc điểm mô tả và ảnh minh họa loài mới này, bài báo còn đưa ra khóa định loại và những đặc điểm hình thái để so sánh sự khác biệt của loài này với một loài duy nhất đã biết trước đây từ khu hệ của Indonesia, *Sulorgilus reclinervis* van Achterberg.

Từ khóa: Ghi nhận mới, loài mới, ong ký sinh, Đông Phương, Việt Nam, Indonesia, Trung Quốc.

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