

Papéis Avulsos de Zoologia

AUSTROASCIA SEGERSI, A NEW GENUS AND SPECIES (DIPTERA: SYRPHIDAE)

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ABSTRACT

A new genus and species of Syrphidae, Austroascia segersi Thompson & Marnef, is described from Chile (Valparaiso Prov.). Its relationships are discussed.

SUMARIO

Se describe un nuevo género y una nueva especie de sírfido, Austroascia segersi Thompson & Marnef, de Chile (Prov. Valparaiso). El género pertenece a la subfamilia Eristalinae, tribu Brachyopini, subtribu Spheginina y difiere de los demás géneros eristalinos por la combinación de los dos caracteres: puente metacoxal completo y el mesopleuron anterior piloso. El género se distingue como sigue: Cara derecha con epistoma saliente, desnuda; frente en los sexos ancha y con lados paralelos; ojos con pelitos cortos y esparsos, separados en el macho; arista desnuda; mesopleuron con la parte anterior plana y pilosa; sternopleuron con áreas de pelitos dorsal y ventral; metasternum desnudo; puente postmetacoxal completa; mesonotum con cerdas débiles en el callus postalar; escutelo con cerdas marginales, sin franja ventral de pelitos ni surco pre marginal; tarso posterior del macho muy modificado; ala casi completamente con pelitos microscópicos; alula estrecha; vena transversa anterior a 1/5 basal de la celda discal; tercera vena derecha; transversa apical ligeramente recurrente; vena spuria ausente; abdomen oval alargado; abdomen del macho con el 4º tergito con los lados cubriéndose ventralmente; cercos del macho alargados y extendiéndose encima del 4º tergito ventralmente.

A new syphid fly, *Austroascia segersi*, was discovered flying around and feeding on the flowers of a tall bush of "canelo" (*Drimys winteri*

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J. R. & G. Forster) by the junior author in the Bosque Relicto at Quintero, Prov. Valparaiso, Chile, during October. The flies were rather numerous though only a few specimens were collected. None were seen or collected in copula but their activities looked like courtship behavior. The fly was not found anywhere else by the junior author during 4 yers of collecting in Chile (1963-1967). The only other known material was collected in January at El Salto, Prov. Valparaiso, extending the flight period from October to January, the austral summer. Nothing else is known of the biology of *Austroascia segersi*, but the meager available data suggest to us that the fly is restricted to canelo and that the early stages may also be so restricted. Thus the plant should be the starting place for further investigations.

***Austroascia* Thompson & Marnef, gen. n.**

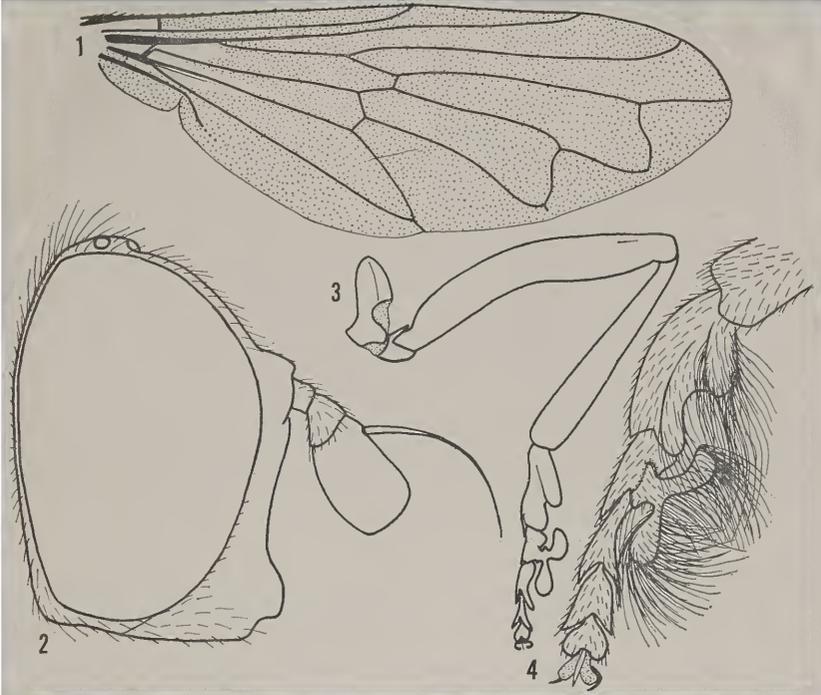
(Figs. 1-9)

Head. Face bare, straight with epistoma produced anteriorly, produced medianly into weak carina; cheek very narrow, pilose; front broad and parallel sided in both sexes, pilose; eye very sparsely pilose, with pile very short, shorter than basal width of arista; 3rd antennal segment elongate-oval; arista bare.

Thorax: shiny, short pilose; humerus pilose; proepisternum pilose; proepimeron bare; mesopleuron differentiated into flat anterior and convex posterior parts, pilose on upper 1/2 of anterior and on all of posterior parts; sternopleuron pilose only on upper 1/4; pteropleuron pilose only anteriorly; hypopleuron and barrette bare; metasternum under developed, metathoracic spiracle embedded in metathoracic epimeron; plumula very short; distinct bristles only on postalar callus and scutellar margin; scutellum without ventral pile fringe and premarginal groove. Legs: middle coxa with posterior surface pilose. Male legs: middle tibia with basoventral long bristles on posterior surface; middle tarsus with elongate basitarsomere; hind femur elongate, slightly arcuate, without ventroapical spinose setae; hind tarsus greatly modified, with basitarsomere excavated on anterior apical 1/2, with 2nd tarsomere modified laterally into a bilobed process, with long dorsolateral pile on basal 2 tarsomeres. Wing: extensively microtrichose; stigmatic crossvein absent; marginal cell open; 3rd vein straight; anterior crossvein at basal 1/5 of discal cell; apical cell closed, petiolate, with obtuse apex, with petiole long, much longer than apical crossvein; anal cell with short petiole, about as long as humeral crossvein; alula narrow, narrower than 2nd basal cell; spurious vein absent.

Abdomen: elongate, slightly tapering posteriorly, cylindrical in male, broader and flatter in female; 2nd and 3rd terga of male each with weak apicomedial tubercle. Male genitalia: cercus greatly elongate, enlarged and with lateral margin sinuate, with medial margin approximately parallel to opposite margin on other cercus on basal 2/3 and divergent on apical 1/2, connected to surstylar apodemes at midlength by a narrow sinuate process; 9th tergum approximately quadrate in lateral view except apicoventral margin prolonged pos-

teriorly and fused to surstyle; surstyle elongate, fused to 9th tergum, apically divided into two lobes; surstyler apodemes fused medially, elongated anteriorly, with a narrow mediadorsal sinuate process connected to ventral margins of cerci; 9th sternum flattened and elongate, fitting between surstyles, with a large ligular excavation, which is about 2/3 length of sternum, with sides of ligular area infolded and anteriorly fused to ventral flange of aedeagal apodeme, dorsomedially partially fused to aedeagus; superior lobe fused to 9th sternum, simple, lobelike, pilose on posteromedial surface; aede-

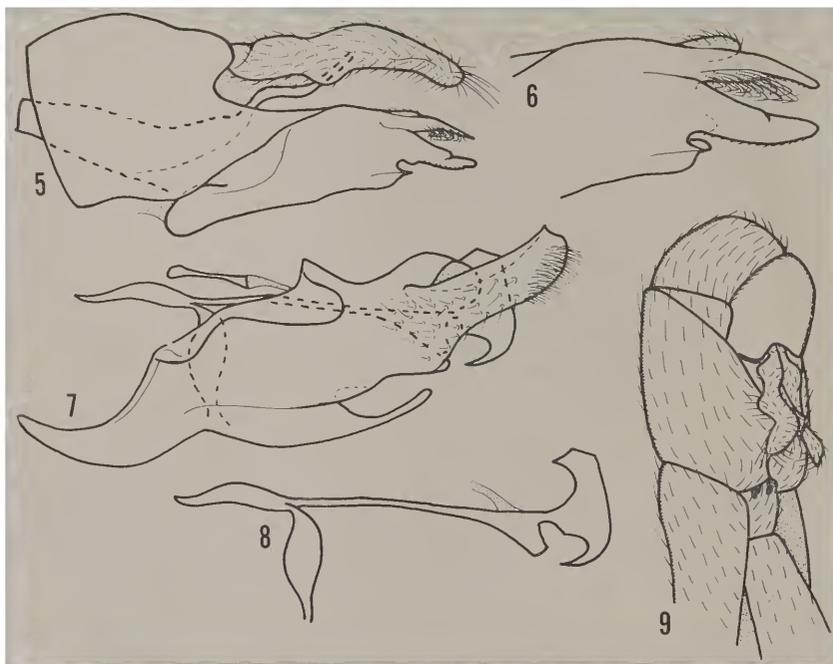


Figs. 1-4. *Austroascia segersi* Thompson & Marnef, male: 1 wing; 2, head, lateral; 3, hind leg, lateral; 4, hind tarsus, oblique lateral.

agus elongate, with elongate rodlike base, apically forming a pair of large lateral hoods, with genital aperture between tips of hooks; aedeagal apodeme small, short, with a large apicoventral flange, lateral margins of which are fused to and continuous with infolded sides of 9th sternum; ejaculatory apodeme small, simple, rodlike.

Type-species, *Austroascia segersi* Thompson & Marnef, new species.

Austroascia belongs to the subfamily Eristalinae (=Milesiinae), tribe Brachyopini (=Chrysogasterini), subtribe Spheginina (*sensu*



Figs. 5-9. *Austroascia segersi* Thompson & Marnef, male genitalia: 5, 9th tergum and associated structures, lateral; 6, apex of surstyle, lateral with a slight oblique bias; 7, 9th sternum and associated structures, lateral; 8, aedeagal apodeme and aedeagus, lateral; 9, apex of abdomen, ventrolateral.

Thompson, 1972: 114-115). The genus is readily distinguished from all other eristaline genera by its complete postmetacoxal bridge and pilose anterior mesopleuron. The structures of the male hind leg and genitalia are unique. The unique phylogenetic relationships of *Austroascia* are diagramed (Diagr. 1). The name *Austroascia* is feminine and is from *Austro*, meaning southern, and *Ascia*, referring to the syrphid genus *Ascia*.

***Austroascia segersi* Thompson & Marnef, sp. n.**

Male — Head: face opaque whitish yellow, shiny; cheek translucent yellow, shiny, yellow pilose; frontal lunule brownish yellow; front brownish yellow around antennal bases, yellow on medial 1/3 and on sides on lower 2/3, brownish black on upper 1/3, shiny, yellow pilose; occiput yellow on lower 1/5, brownish black on upper 4/5, silvery pollinose, yellow pilose; eye very sparsely short white pilose; antenna pale orange brown, with ventral 1/2 of 1st 2 segments more yellowish, black pilose; arista brownish black.

Thorax: shiny, short yellow pilose; humerus opaque whitish yellow; mesonotum bluish black, except for brownish-yellow sublateral vitta and quadrate spot in front of scutellum; notopleuron brownish yellow; postalar callus brownish yellow; scutellum brownish black except brownish yellow above front coxa and yellow on dorsal 1/2 of posterior mesopleuron; metasternum yellow; bristles, 3-4 weak supraalars, 2 strong postalars, 4 strong scutellar; squama, plumula, halter yellowish white. Wing: hyaline, extensively microtrichose, bare only narrowly on bases of basal and anal cells and all of 1st costal cell; epaulet orange, yellow pilose; basicosta orange, brown pilose; basicosta orange, brown pilose; alula microtrichose. Legs: short yellow pilose; coxae orange yellow except slightly more brownish dorsoapically; trochanters yellow; front and middle femora yellowish brown except yellow bases and apices; hind femur brownish black except yellow on basal 1/4 and narrowly on apex; front and middle tibiae similar to femora but yellow areas more extensive; hind tibia yellow except black medial 1/2; front and middle tarsi yellow; hind tarsus yellow except black on ventral 1/2 of basal 2 tarsomeres and yellowish brown on dorsal 1/2 of basomere.

Abdomen: shiny; 1st tergum brownish black, yellow pilose; 2nd tergum mainly brownish black, yellow on basolateral 1/3 and in form of pair of submedial vittae on basal 3/4, appressed yellow pilose on sides and basal 1/5, elsewhere appressed black pilose; 3rd tergum mainly brownish black, yellow on basolateral corner and in form of pair of broad submedial oblique vittae on basal 5/6, mostly appressed black pilose, with a few scattered pale hairs on base and sides; 4th tergum mainly brownish black, brownish yellow on medial 1/3 except for a narrow black medial vitta on basal 1/3, appressed yellowish-white pilose except for a few black hairs basomedially; sterna yellow laterally and brown medially, yellow pilose. Genitalia: bluish black to brownish, long white pilose; cercus yellow, other structures as figured and/or described under generic description.

Female: similar to male except as follows: front with supraantennal spot more brownish black and larger; hind tibia with some black pile medially; hind tarsus with basal 2 tarsomeres brownish black and black pilose anteriorly; terga almost completely yellowish red and short appressed black pilose; 1st and basolateral 1/3 of 2nd tergum more brownish black and long yellow pilose; sterna more extensively brownish black.

Holotype ♂, allotype, 11 ♂♂ 2 ♀♀ paratypes: CHILE, prov. Valparaíso, Quintero, Bosque Relicto, 29 October 1966 (L. Marnef); 3 ♂♂ paratypes, same locality, 27 October 1966 (C. Vivar T.); 1 ♀ paratype, Prov. Valparaíso, El Salto, January 1959 (H. Toro G.). All the specimens from Quintero were captured hovering about and feeding on the flowers of "canelo" (*Drimys winteri* Forster). Holotype and allotype deposited in U.S. National Museum; paratypes in collections of Universidad de Chile, Valparaíso; Universidad Católica, Valparaíso; Canadian National Collection, Ottawa; British Museum (Natural History), London; Institut Royal de Sciences Naturelles de Belgique, Brussels; and L. Marnef.

We take pleasure in naming this species in honor of M. Clement Segers, twice President of the Société royale Belge d'Entomologie.

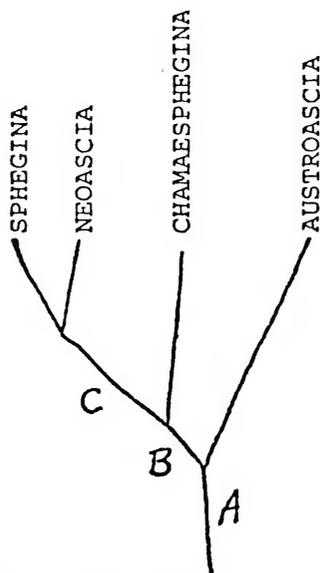


Fig. 10. Phylogenetic relationships of the subtribe Sphegina.

The synapomorphic character states for the principal clades are: A, abdomen elongate or petiolate, alula narrow, face concave or straight in both sexes (eyes dichoptic in male); B, anterior mesopleuron bare, mesonotum without bristles, middle coxa with posterior surface bare, hind femur with apicoventral spinose setae; C, anterior crossvein beyond end of Sc, apical crossvein approximately perpendicular anteriorly, hind femur swollen, hind tibia carinate basoventrally, abdomen petiolate. The autapomorphic character states for the genera are: *Austroascia*, male hind tarsus and genitalia uniquely modified, (postmetacoxal bridge complete); *Chamaesphegina*, scutellum with premarginal sulcus (eyes holoptic in male, anal cell with a long petiole); *Neoascia*, apical and posterior crossveins perpendicular or recurrent; *Sphegina*, face strongly concave, sternopleuron bare, (postmetacoxal bridge complete and broad).