

Duplicate



NOTULAE NATURAE

NUMBER 55

OF

SEPTEMBER 19, 1940 C

THE ACADEMY OF NATURAL SCIENCES OF PHILADELPHIA

ON TWO NEW GENERA OF NYSSONINE WASPS FROM THE NEOTROPICAL REGION (HYMENOPTERA: SPHECIDAE)

BY V. S. L. PATE

*Cornell University; and Research Associate,
The Academy of Natural Sciences of Philadelphia*

In 1938¹ I presented a tentative classification of the Nyssonine wasps. Since that time I have had an opportunity to study additional material in which are representatives of two new and interesting generic entities from South America that are described herewith.

Of the fourteen Nyssonine genera and subgenera now known, only four: *Nysson* (including *Epinysson* and *Synneurus*), *Brachystegus*, *Nippononysson*, and the *Acanthostethus* complex,² are found in the Old World. With the exception of the nominate group, all are distinctive entogenic types confined to the eastern hemisphere. The New World, on the contrary, has eleven genera or subgenera. In the Nearctic Region occur seven, of which only one, *Hyponysson*, is pre-cinctive; the remaining six are intrusions from the Palaearctic or the Neogaeic Realm. However, with the addition of the two new entities described below, the Neotropical Region now possesses no less than eight distinct generic or subgeneric assemblies: *Nysson* (*Epinysson*), *Foxia*, *Cresson*, *Perisson*, *Zanysson*, *Idionysson*, *Losada*, and *Metanysson*, of which *Cresson*, *Perisson*, *Idionysson*, and *Losada* may be regarded as distinctive endemic types. In somewhat the same category as the last four are *Metanysson*, *Foxia*, and probably also *Zanysson*. For, as I have intimated elsewhere,³ though each of the first two genera have as yet more known Nearctic than Neotropical species,

¹ Trans. Amer. Ent. Soc., 64, pp. 117-190, (1938).

² *Acanthostethus* is quite distinct from any New World genus, and susceptible of division into at least four discrete generic or subgeneric groups as I shall indicate elsewhere.

³ Cf.: Trans. Amer. Ent. Soc., 64, pp. 145, 162, 172, (1938).

both are indubitably ectogenic to the Nearctic fauna; each is an incursive element that has arisen in Middle or South America and penetrated the Sonoran Region only in the southwestern United States in relatively recent time. There can be little question, therefore, that the Neogaic Realm is the greatest epicentre in the world for the generic, and probably also the specific, differentiation of the Nyssonine wasps.

To Sr. Pablo Anduze of Puerto Cabello, Venezuela, I am greatly indebted for furnishing me material of the new Venezuelan form described below.

LOSADA⁴ new genus

The distinctive venation of the fore wing, the simple nondentate character of the hind tibiae and femora, the strongly keeled front with the antennal sockets overhung by frontal lobes, and the nonspinose abdominal sternites immediately differentiate *Losada* from all the other genera of the Nyssonini.

Generic Characters.—Head subtrapeziform, broader than long in anterior aspect; vertex flatly arched; inner orbits strongly convergent toward clypeus, slightly angulate medially above. Mandibles simple apically, entire beneath, edentate within. Antennae 12-segmented in females; antennal sockets overhung medially above by small frontal lobes. Front medially between and above antennal insertions with a strong, high cristate keel which forks dorsally and resembles a capital ypsilon in shape.

Thorax with the mesonotal laminae large, elongate rectangular, squarely truncate and vertically declivous behind; scutellum with lateral margins simple, rounded, not reflexed, and anteriorly with the suture between it and the mesonotum deep, narrow, simple, and not appreciably widened laterad; postscutellum simple. Mesopleura rounded anteriorly, without an epicnemium, and dorsally just below fore wing base with a sharp protuberant spinoid tubercle. Metapleura dorsally above with an outcurved laminate flange. Propodeum with dorsal caudolateral corners sharply angulate and armed with a small weak spine.

Legs: Middle tibiae with two apical calcaria. Hind femora apically below with a small flat genicular lobe which is not thickened, dentiform, nor truncate apically. Hind tibiae simple, without teeth or serrulations on outer posterior margin. Fore tarsi simple, without traces of a pecten. Claws simple; pulvilli small but distinct.

Fore wings with three submarginal cells, the second petiolate, complete, and receiving only the first recurrent vein, the second recurrent

⁴ After Diego de Losada, who in 1566 established Caracas, now capital of Venezuela; and one of the ablest early colonial officials of that country.

vein received well within the third submarginal cell; subdiscoidal vein with second abeissa complete to wing margin. Hind wings with cubitus arising far beyond the transverse median vein.

Abdomen barely constricted between the segments; apical margins of segments apparently simple, not doubly margined. First to fifth tergites inclusive each with a transverse row of coarse, even fimbriae along caudal margins; apical margins of second, third and fourth sternites furnished with similar but much finer fimbriae which are broadly interrupted medially. Tergites and sternites simple, not dentate nor spinose latero-apically. Females with lateral margins of last (sixth) tergite not meeting on mid-ventral line, the corresponding sternite thus visible and convex; ultimate tergite simply convex, without a defined pygidial area.

GENOTYPE: *Losada paria* new species.

This distinctive genus is known at present from only the female sex, but the males probably have the antennae distinctly 13-segmented. Moreover, in all likelihood, they possess conspicuous hair-fringes medially along the caudal margins of the second, third and fourth abdominal sternites, inasmuch as the apical fimbriae on the corresponding sternites of the female sex are broadly interrupted medially as they are in *Metanysson* and *Foxia* whose males likewise have this characteristic feature.

Remarks.—The present genus presents a strange combination of specialized and apparently generalized characters, as well as a curious intermixture of diagnostic features characteristic in greater or lesser degree of *Foxia*, *Cresson*, *Idionysson*, and *Metanysson*. The frontal armature is very similar to that of *Idionysson* and *Cresson*; but in the simple non-dentate character of the hind tibiae, *Losada* agrees with *Cresson* and *Foxia*. The venation of the wings is typical of *Foxia*, yet the general structure of the abdomen, exclusive of the last segment, is like *Metanysson*, while the genicular lobe of the hind femora is practically identical with that of *Idionysson*. Although differing in certain fundamental characteristics, such as the structure of the ultimate abdominal segment, the conformation of the hind tibiae and the genicular lobe of the posterior femora, the venation of the fore wing, and the type of frontal armature, the general habitus of *Losada* is basically rather like that of *Metanysson*, and it is not improbable that the present entity represents a peculiar and interesting lateral development of, and specialization from, the ancestral stock in which that genus had its origin.

Losada paria⁵ new species

Text-figs. 1 and 2.

Inasmuch as *Losada* is monotypic, the distinguishing features given for the genus will likewise serve to differentiate the sole included species from the other Nyssonine wasps.

Type.—♀; San Esteban, Estado Carabobo, Venezuela. November 24, 1939. (Pablo Anduze.) [Academy of Natural Sciences of Philadelphia, Type no. 4209.]

Female. 5 mm. long. Black; flagellum, palpi, and tarsi, fulvous. Labrum, mandibles, scape, trochanters, femora at base and apex, and tibiae, light brunneous. Tegulae dark castaneous; axillary sclerites brunneous. Wings hyaline, tinged with fuscous particularly in the costal and marginal cells; membrane uniformly clothed with dark, rather noticeable villi; veins and stigma bruneous.

Head, and scape beneath, with short, suberect, aeneous setulae; posterior orbits, and front above and beside forked cristate keel clothed with appressed light aureous pubescence. Front, vertex, and temples covered with rather fine reticulate areolations, the foveae nitidous, the ridges sparsely and finely punctate; ocellar area raised, but not tuberculate, anterior ocellus margined above and laterally by a fine ambient carinule, hind ocelli with inner margins overhung by a fine translucent laminate flange; temporal carinae present and well developed for entire length. Antennae approximate at base; scapes short, thick, obterete; pedicel short, subglobose, five-sixths the length of first flagellar article; flagellum finely puberulent, all segments longer than broad, second segment slightly longer than first, ultimate article simple, terete, subequal in length to preceding two segments combined. Clypeus with dense, appressed silvery pubescence; flat, subtrapeziform; medioapically with a narrow, glabrous, nitidous, concave bevel at each side of which is a distinct tooth.

Thorax with rather long decumbent aeneous setulae dorsally and on mesopleura; pronotum dorsally, and tubercles with appressed aureous pubescence; mesopleura densely clothed with appressed light aureous pile. Pronotum finely punctate on anterior declivous face; dorsal surface transversely concave medially before which the anterior margin is rather sharply subcarinate but rounded laterad, humeral angles sharply dentate. Mesonotum, scutellum and postscutellum fulgid and with rather coarse reticulate areolations, the foveae nitidous, the ridges with scattered setigerous punctures; scutellum with lateral margins simple, not reflexed; postscutellum simple. Mesopleura with areolations like mesonotum but sculpture obscured by heavy pile. Metapleura glabrous, nitidous, dorsal margins flaring upward and outward

⁵ After *Paria*, the name given by geologists to the northern borderland of South America, which made the southern frame to the ancient Caribbean mediterranean.

in a laminate flange. Propodeum with lateral areas of dorsal and posterior faces and posterior portion of lateral faces clothed with long, decumbent and appressed, conspicuous aureous pile; dorsal face medially with a glabrous, nitidous, trigonal area which is bisected by a longitudinal carinule on each side of which is a large elongate longitudinal areole, laterad of which are several oblique subrectangular areoles, surface laterad of trigonal area coarsely and irregularly areolate; posterior face with median region glabrous and nitidous, bisected medially by a pair of close, subparallel carinulae, laterad of these, on each side and two-thirds the distance to lateral margins, with another carinule subparallel to lateral margins; lateral faces subnitidous anteriorly, finely punctate medially, coarsely areolate posteriorly; propodeal spines reduced to short, weak, denticular angulations.

Legs clothed with short, closely appressed, silvery pubescence and long, suberect, light setulae which are most noticeable on hind tibiae.

Abdomen fulgid; with moderately coarse but well separated setigerous punctures on first two tergites, the puncturation becoming closer on each succeeding tergite until almost approximate on last; second sternite with sparse, scattered and rather fine punctures, remaining tergites punctured like corresponding tergites. Tergites clothed with decumbent aeneous pubescence and scattered, suberect light setulae; anterior half of first tergite with fine appressed, light aureous pile; apical margins of first to fourth tergites with fasciae of aureous pile which is broad laterally and attenuate medially; first to fifth tergites with conspicuous, coarse, even, light aureous fimbriae along caudal margins; second tergite evenly convex, not angulate nor tuberculate basally, and sparsely clothed with appressed puberulent silvery pubescence; second, third and fourth sternites with silvery fimbriae similar to those of corresponding tergites but finer and broadly interrupted medially. Last segment conical, no pygidial area present on ultimate tergite.

Male. Unknown.

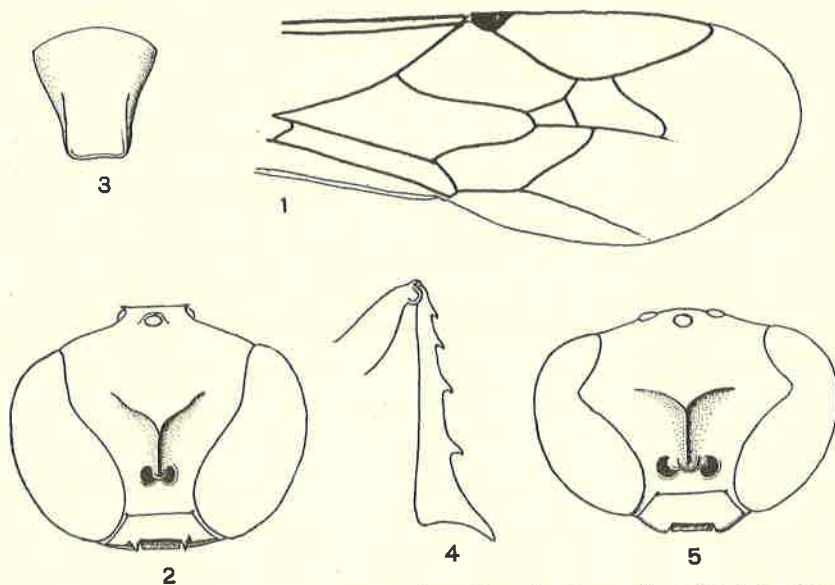
This species is known only from the unique female.

IDIONYSSON⁶ new genus

- Nysson* Gerstaecker, Abh. Naturf. Ges. Halle, 10, p. 117; (1866); [in part].—
Handlirsch, Sitzber. Akad. Wissen. Wien, 95, p. 315, (1887); [in part].—
Handlirsch, Sitzber. Akad. Wissen. Wien, 104, p. 1011, (1895); [Artgr. *texanus*,
in part].—Dalla Torre, Cat. Hymen., 8, p. 568, (1897); [in part].
Nysson (*Zanysson*) Maidl & Klima, Hymen. Catal., Pars 8, Sphec. I, p. 148,
(1939); [in part].

This curious and interesting genus is intermediate in character between *Zanysson* and *Metanysson*, combining certain features of both,

⁶ From *idios*, strange, peculiar, + *Nysson*.



Losado paria new genus and species. Female (*type*; San Esteban, Venezuela): Fig. 1.—Distal two-thirds of fore wing. Fig. 2.—Anterior aspect of head.

Idionyssus borero new genus and species. Female (*type*; Villarrica, Paraguay): Fig. 3.—Dorsal aspect of ultimate abdominal tergite. Fig. 4.—Hind tibia and tip of femur. Fig. 5.—Anterior aspect of head.

(All figures greatly enlarged.)

yet quite discrete from each. It agrees with *Zanysson* in the venation of the fore wing, the structure of the ultimate abdominal tergite and sternite and the bilobate postscutellum, and the absence of ventral abdominal hair-fringes in the male sex, and with *Metanysson* in the quadridentate hind tibiae. From both, it may be distinguished by the angularly emarginate inner orbits, the forked frontal keel, the simple caudal margins of the abdominal segments, and the structure of the genicular lobe of the hind femora. In the three latter respects, *Idionyssus* superficially resembles the remarkable Venezuelan entity *Losada*, but may be differentiated from it by the characters given in the discussion of that genus on a foregoing page.

Generic Characters.—Head subtrigonal in anterior aspect; vertex very flatly arched; inner orbits strongly divergent toward vertex and sharply and angularly emarginate above. Mandibles simple apically, entire beneath, edentate within. Antennae 12-segmented in females,

distinctly 13-segmented with ultimate article subhamate in males; antennal sockets overhung medially above by small frontal lobes. Front medially just above antennal insertions with a high, strong cristate keel forking dorsally and resembling a capital ypsilon in shape.

Thorax with the lateral margins of the scutellum produced into sharp, sublaminar, flat expansions and anteriorly with a broad foveolate, glabrous trough separating it from the mesonotum; postscutellum bilobed, *i. e.* with alate lateral or posterior expansions. Mesopleura rounded anteriorly, without an epinemium, and dorsally just below fore wing bases with a sharp protuberant spinoid tubercle. Propodeum with dorsal caudolateral angles armed with strong spines.

Legs: Middle tibiae with two apical calcaria. Hind femora apically below with a small, flat genicular lobe which is not thickened, dentiform, nor truncate apically. Hind tibiae with four stout teeth on outer posterior margin. Hind coxae with a sharp carina lengthwise on opposing surfaces. Fore tarsi of females without vestiges of a pecten. Claws simple; pulvilli small but distinct.

Wings with three submarginal cells in fore wing, the second petiolate and receiving both recurrent veins; stigma small. Hind wing with cubitus arising far beyond the transverse median vein.

Abdomen barely constricted between the segments; apical margins of segments simple, not doubly margined; caudal margins with fine fimbriae which are continuous and not interrupted medially on sternites in both sexes; males without ventral abdominal hair fringes. Tergites and sternites simple, not dentate nor spinose latero-apically. Females with lateral margins of last tergite not meeting on mid-ventral line, the corresponding sternite thus visible and convex, the ultimate tergite with a poorly defined, elongate subrectangular pygidium present apically only; males with ultimate tergite tridentate apically.

GENOTYPE: *Idionysson borero* new species

This genus has been erected for the reception of the following new species and *Idionysson chrysozonus* (Gerstaecker),⁷ which, at the present time, are the only forms that may be assigned to it with any degree of certitude.

*Idionysson borero*⁸ new species

Text-figs. 3, 4 and 5.

The present species has the superficial habitus of *chrysozonus*, but may be distinguished from that form by the non-tuberculate character of the ocellar area, the more weakly spinose humeral angles of the

⁷ *Nysson chrysozonus* Gerstaecker, Abh. Naturf. Ges. Halle, 10, p. 117, (1866); [♂: Montevideo, Uruguay].—Handlirsch, Sitzber. Akad. Wissen. Wien, 95, p. 315, (1887); [♂].—Handlirsch, Sitzber. Akad. Wissen. Wien., 104, p. 807, (1895); [♀: Rio Grande do Sul, Brazil; ♂: Montevideo, Uruguay].

⁸ After the Borero Indians, a tribe of Tupi-Guarani stock.

pronotum, and the deep foveolate suture between the mesonotum and scutellum, as well as other feature given in the following description.

Type.—♀; Villarrica, Paraguay. (F. Schade.) [Museum of Comparative Zoölogy.]

Female. 11 mm. long. Black; mandibles and knees miniatous; palpi, apex of scape, tibial spurs, and tegulae, fulvous; tarsi and axillary sclerites brunnaceous; tips of propodeal spines translucent testaceous. Wings clear hyaline, somewhat clouded along anterior margin of radial cell; stigma and veins castaneous.

Head, and scape beneath, with rather long, suberect, light aeneous setulae; front and clypeus with dense appressed aureous pile, vertex and posterior orbits more sparsely clothed with decumbent aureous pubescence. Vertex, temples, and front above the high cristate keel closely and coarsely pitted, the foveolae glabrous and nitidous, the ridges with fine setigerous acupuncturation; ocellar area raised but not tuberculate, nor with hind ocelli overhung by flanges, anterior ocellus with a minute projection above on each side of middle; temporal and occipital carinae wanting. Antennae approximate at base; scapes short, thick, cylindrical, anteriorly with a fine sharp carinule running lengthwise; pedicel short, subcylindrical, about one-half the length of the first flagellar article; flagellum finely puberulent, first segment about as broad as long and four-fifths the length of second, remaining articles distinctly longer than broad, the last simple, terete, subequal in length to two preceding segments combined. Clypeus flat, subtrapeziform, medio-apically with a narrow, transverse, glabrous, subfulgid, concave bevel.

Thorax with rather long, suberect, aeneous setulae dorsally and on mesopleura; pronotum dorsally to humeral angles densely clothed with appressed, deep aureous pubescence; mesonotum and scutellum with fine, rather sparse, decumbent puberulent, light aureous pubescence becoming denser on postscutellar lobes; mesopleura with silvery pile similar to mesonotum; metapleura with sparse, pollinose, light aureous pile. Pronotum, mesonotum, scutellum, postscutellum, and mesopleura with surface sculpture similar to that of vertex. Pronotum with anterior dorsal margin weakly and transversely angulate medially but rounded laterally, the humeral angles weakly dentate, the anterior dorsal margins of tubercles sharply, obliquely carinate; scutellum with strongly reflexed, sublamine lateral margins, the hind angles roundly angulate, anteriorly with a broad transverse trough containing six foveae; postscutellum with lobes trigonal, roundly pointed apically and pointing caudad; metapleura fulgid, without sculpture except traces above, dorsal margins flaring upward and outward in a laminate flange. Propodeum on lateral areas of dorsal and posterior faces densely clothed with long, decumbent, bright aureous pile; dorsal face medially with a trapeziform area which has a broad, elongate, glabrous, nitidous,

subrectangular areole medially, laterad of which are a number of fine longitudinal subparallel carinulae; posterior face medially with a pair of carinules which are divergent dorsad and thus enclose a broad cuneate area coarsely foveolate within, lateral areas bisected by a carinule subparallel to lateral margins, surface of inner lateral areas glabrous and nitidous, of outer areas fulgid and finely areolate; lateral faces coarsely areolate on upper half, without sculpture below.

Legs with femora and tibiae sparsely pitted, clothed with fine appressed puberulent silvery pubescence and rather long, suberect setulae.

Abdomen opaque; clothed with very fine puberulent, appressed pubescence, aeneous on tergites, silvery on sternites, and scattered, short, decumbent setulae which are longer and aureous along caudal margins; anterior two-thirds of first tergite with dense, appressed, bright aureous pile; first five tergites with bright aureous pubescent fasciae apically, the caudal margins of these segments with fine, even aureous fimbriae, as are also the corresponding sternites, the sternal fimbriae continuous, not interrupted medially. First five segments with small pit-like, setigerous punctures, irregularly and sparsely scattered on disc of tergites but becoming closer and more numerous laterally, and evenly and widely disposed on sternites. Second sternite produced and roundly angulate medially at base in lateral aspect. Ultimate segment with fine acupuncturation upon which is superposed somewhat coarser, scattered punctures; tergite with a poorly defined, subquadrate pygidial area on apical half; hypopygium broadly subtrapeziform, relatively flat, bisected longitudinally by an inconspicuous, low, glabrous, nitidous keel, and vertically angulate laterally at junction with tergite, apex broadly retuse.

Male. Unknown.

The present species is known only from the unique female described above.