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REVIEW OF THE NEW WORLD DIMARINI WITH THE  
DESCRIPTION OF A NEW GENUS FROM PERU  
(NEUROPTERA: MYRMELEONTIDAE)

LIONEL A. STANGE  
Florida State Collection of Arthropods,  
Division of Plant Industry,  
P. O. Box 1269  
Gainesville, Florida 32602

## ABSTRACT

The genus *Dimares* Hagen is divided into two genera, *Dimares* with one species in Brazil and Argentina, and a new genus *Millerleon* with three species in the coastal desert of Peru. A world-wide key for the genera in the tribe Dimarini is presented based on adults and larvae. Also, a key for the species in the genus *Millerleon* is presented. A diagnosis of the tribe, the two American genera and the American species are provided with new records for the species. Data are provided about the biology and morphology of the larvae of *Dimares elegans* and *Millerleon bellulus*.

## RESUMEN

Se divide el género *Dimares* Hagen en dos géneros, *Dimares* que consta de una especie en Brasil y Argentina, y *Millerleon*, un género nuevo con tres especies en el desierto costal del Perú. Se presenta una clave para los géneros del mundo de la tribu Dimarini basada sobre los adultos y las larvas. También, se presenta una clave para las especies de *Millerleon*. Un diagnóstico de la tribu, los dos géneros Americanos y las especies Americanas son provistas con registros nuevos de las especies. Se proporcionó datos sobre la biología y morfología de las larvas de *Dimares elegans* y *Millerleon bellulus*.

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In 1982 Miller and Stange discovered *Dimares* larvae in the Peruvian Coastal Desert and reared two species. These larvae, when compared to larvae of *Dimares elegans* (Perty) from Argentina, possess so many odd characteristics that it is apparent that the two groups of *Dimares* are not congeneric. The adults also show significant differences in the form of the male paramere, presence or absence of the pilula axillaris, and in the development of the pretarsal claws. Accordingly, a new genus is proposed for the Peruvian coastal desert species. A key to genera, based on adults and larvae, is provided as well as a key to the species.

## Tribe Dimarini Navas

Dimarini Navas. 1914. Mem. R. Acad. Barcelona 11:107

Echthromyrmicini Markl, 1954. Verh. Naturf. Ges. Basel 65:217. New synonymy.

Echthromyrmicinae Holzel, 1972. Beitr. naturk. Forsch. SudwDtl. (Suppl.) 1972 (1):8. Further Description: Markl 1954:217-218.

Diagnosis: ADULTS: Pronotum wider than long; legs stocky, femoral sense hair absent; tibial spurs well developed; tibial spurs and pretarsal claws thick, well developed; pretarsal claws strongly curved, not capable of closing upon tarsus; labial palpus elongate, distal palpomere thread-like, sensory area often slit-like; male abdomen with non-eversible glandular openings on pleura between segments 5 & 6, 6 & 7, and 7 & 8, without associated setae; male ectoproct without postventral lobe; female posterior gonapophysis less than 1.5X longer than wide; female ectoproct and lateral gonapophysis with strong digging setae; forewing vein CuP fuses with vein IA a short distance from wing base; hindwing vein CuP curves anteriorly to fuse with posterior fork of MP + CuA a short distance after fork; hindwing radial sector arises near base, 1-3 presectoral crossveins.

LARVAE: Labial palpus shorter than basal width of mandible; antenna short, flagellomeres all wider than long, mandible with 2 or 3 teeth, sternite IX with or without highly modified digging setae.

Discussion: This tribe has 3 known genera, *Echthromyrmex* from the Ethiopian and Oriental Regions and two genera from the New World. Larvae are known only for the New World genera. The tribe belongs to the subfamily Palparinae. The combination of the absence of the femoral sense hair (except Maulini), condition of the hindwing vein CuP, and thread-like labial palpus (not thread-like in some Palparini) are diagnostic characteristics of the Palparinae of which only the tribe Dimarini is represented in the New World. It differs from the largest tribe of the subfamily, Palparini, in the fusing of forewing vein 1A with MP + CuP. However, one species in the Palparini, *Palparidius concinnus* Peringuey from southern Africa, has wing venation as in the Dimarini. A third tribe in the subfamily, Maulini, is similar to the Dimarini in wing venation

except in Maulini the origin of the radial sector of the hindwing is much more distad from the base. The genera can be identified with the following key.

#### KEY TO GENERA OF THE DIMARINI

##### ADULTS

1. Sensory opening of distal palpomere of labium does not reach apex of palpomere; Old World ..... *Echthromyrmex* McLachlan  
Sensory opening of distal palpomere of labium extends around apex and nearly reaches opposite side; New World ..... 2
2. Pretarsal claws of hindleg much longer than hind basitarsus; (Fig. 2); male paramere with long hook, toothed apically (Fig.4); no teeth along mesal margin; male pilula axillaris absent; sexual dichromatism present, males with essentially unmarked wings, females usually with numerous brown spots or bands; Brazil south to Argentina ..... *Dimares* Hagen  
Pretarsal claws of hindleg shorter than hind basitarsus (Fig. 1); male paramere without hook, 12 or more teeth along mesal margin (Fig. 5); male pilula axillaris well developed; both male and female with pigmented wing spots or bands; Peruvian coastal Desert (southern Ecuador to northern Chile) .....  
..... *Millerleon* Stange

##### LARVAE

- Mandible with 3 teeth (Fig. 15); sternite VIII with well developed submedian tooth; sternite IX with 2 pairs of highly modified digging setae (Fig. 15); Brazil to Argentina ..... *Dimares* Hagen  
Mandible with 2 teeth (Fig. 13); sternite VIII without submedian tooth; sternite IX without highly modified digging setae (Fig. 12); Peruvian Coastal Desert .  
..... *Millerleon* Stange

##### *Dimares* Hagen 1866

1866. *Dimares* Hagen. Stettin. ent. Ztg. 27:372, Type species: *Myrmeleon elegans* Perty, by original designation.  
1909. Banks. J. New York Ent. Soc. 17:1-2 (Key to species)  
1913. Navas. Mis. Arc Meridien Equatorial Amer. Sud 10(1):71 (Key to species)  
1914. Navas. Mem. R. Acad. Barcelona 11:101 (in tribe Dimarini)  
1976. Riek. Journal Australian entomological Society 15:297 (in Dendroleontinae)

Diagnosis: Adults: Sexual dichromatism present, males without pigmented wing bands, females usually with pigmented wing bands; frons with several scattered setae; distal labial palpomere with slit-like opening extending around apex to opposite side; basitarsus of foreleg about 2.0X longer than middle diameter, that of hindleg about 3.0X longer than middle diameter of tarsus; hind tibial spurs as long as or longer than basitarsus; pretarsal claws at least 1.5X longer than hind basitarsus; male pilula axillaris absent; male paramere with long hook, 2-4 teeth apically. Female terminalia with pre-genital plate membranous; gonapophyseal plate long and slender. LARVAE: mandible with 3 teeth; ventral head capsule with numerous setae; sternite VIII with submedian tooth; sternite IX with 2 pairs of highly modified digging setae posteriorly (Fig. 15).

Systematics: This genus appears to have only one geographically variable species, *Dimares elegans* (Perty). This genus is unusual because the males and females show marked sexual dichromatism, the males having unmarked wings and most of the females

have extensive brown markings. This led to a duplicity of names. Walker (1859) described each sex as a different species. Subsequent workers, especially Longinos Navas and Nathan Banks, were also unaware of this sexual dichromatism.

*Dimares elegans* (Perty)

(Figs. 2, 4-6, 15)

1833. *Myrmeleon elegans* Perty, Delect. animal. articul. Brasil 3:125. Holotype female, Brasilia (Munich!).
1853. Walker. List neuropterous insects British Museum p. 395 (repeat of Latin description)
1859. *Myrmeleon conicollis* Walker Trans. ent. Soc. Lond. 5:188. Holotype female, Santarem (Brazil) (BMNH!).
- Myrmeleon albidilinea* Walker, Trans. ent. Soc. London 5:189. Holotype male, Amaz. (BMNH!).
1861. *Myrmeleon congruus* Hagen, 1861. Smith. Misc. Coll. 4(1):326.
1866. Hagen, Stettin, ent. Ztg. 27:372 (in genus *Dimares*), 437 (*congruus*, nomen nudum).
1867. McLachlan, J. Linn. Soc. (Zool.) 9:281 (*conicollis* = *elegans*).
1909. Banks, J. New York ent. Soc. 17:146 (in Key to species).
1912. *Dimares elegans lepida* Navas. Broteria 10:41 Fig. 3. Syntypes, Catamarca & Mendoza, Argentina (Copenhagen).
1914. *Dimares erythro stigma* Navas, Broteria 12:47, Fig. 2. Holotype female, Solidade, Brazil (Vienna!).
1915. Navas. Mem. R. Acad. Barcelona (3)12:125 (*lepidus* = valid species)
1915. Navas. Rev. Acad. Madrid 17:293 (Records from Argentina)
1920. *Dimares hageni* Banks, Bull. Mus. Comp. Zool. Harv. 64:330. Syntypes, Chapada, Brazil, H. H. Smith (MCZ). (*lepidus* = *elegans*).
1920. Esben-Petersen, Bull. Ann. Soc. R. ent. Belgique 60:190 (*erythro stigma* = *albidilinea*).
1920. Navas. Ann. Soc. cient. argent. 90:16, 57 (Records from Argentina).
1920. Navas, Estudios 22:359 (Records from Argentina).
1922. Navas, Rev. Acad. Madrid 19:255, 256 (Records from Argentina).
1922. Navas, Arx. Inst. Cienc. 7:182 (Records from Argentina).
1923. Navas, Rev. Mus. Paulista 13:768-771) (Taxonomy: *hageni* = *elegans*).
1926. Navas, Estudios 32:105 (Records from Argentina).
1928. Navas, Estudios 35:140 (Records from Argentina).
1930. Navas Rev. Soc. ent. argent. 3:127 (Records from Argentina).
1954. Markl, Verh. naturf. Ges. Basel 65:196, 203, 204, 217, Figs. 10, 41, 44, 65 (wing venation).
1967. Stange, Acta Zool. Lilloana 22:43 (*albidilinea* = *elegans*).
1976. Riek. Australian J. Zoology 15:344, Fig. 5 (nota, wing base).
1976. Stange et al. Acta Zool. Lilloana 32:109 (Larva).
1984. Stange, Nat. Geographic Soc. Res. Reports 17:69 (Record from Argentina).

Diagnosis: Length of body 30-40 mm; forewing length 20-36 mm, greatest width 7-10 mm. Face yellowish brown with darker brown band below, laterad and above antennal fossae, darkest mesad of fossae, sometimes dark brown on labrum; vertex with anterior vertex row of three dark brown scar marks, middle mark extends posteriorly to middle row of vertex markings which consist of five irregular markings; posterior row with median dark spot, sometimes submedial dark spot; antenna nearly all dark brown except scape and pedicel apically; labial palpus yellowish brown mesally, dark brown externally; nota yellowish brown with dark brown stripe medially and sublaterally; legs pale brown

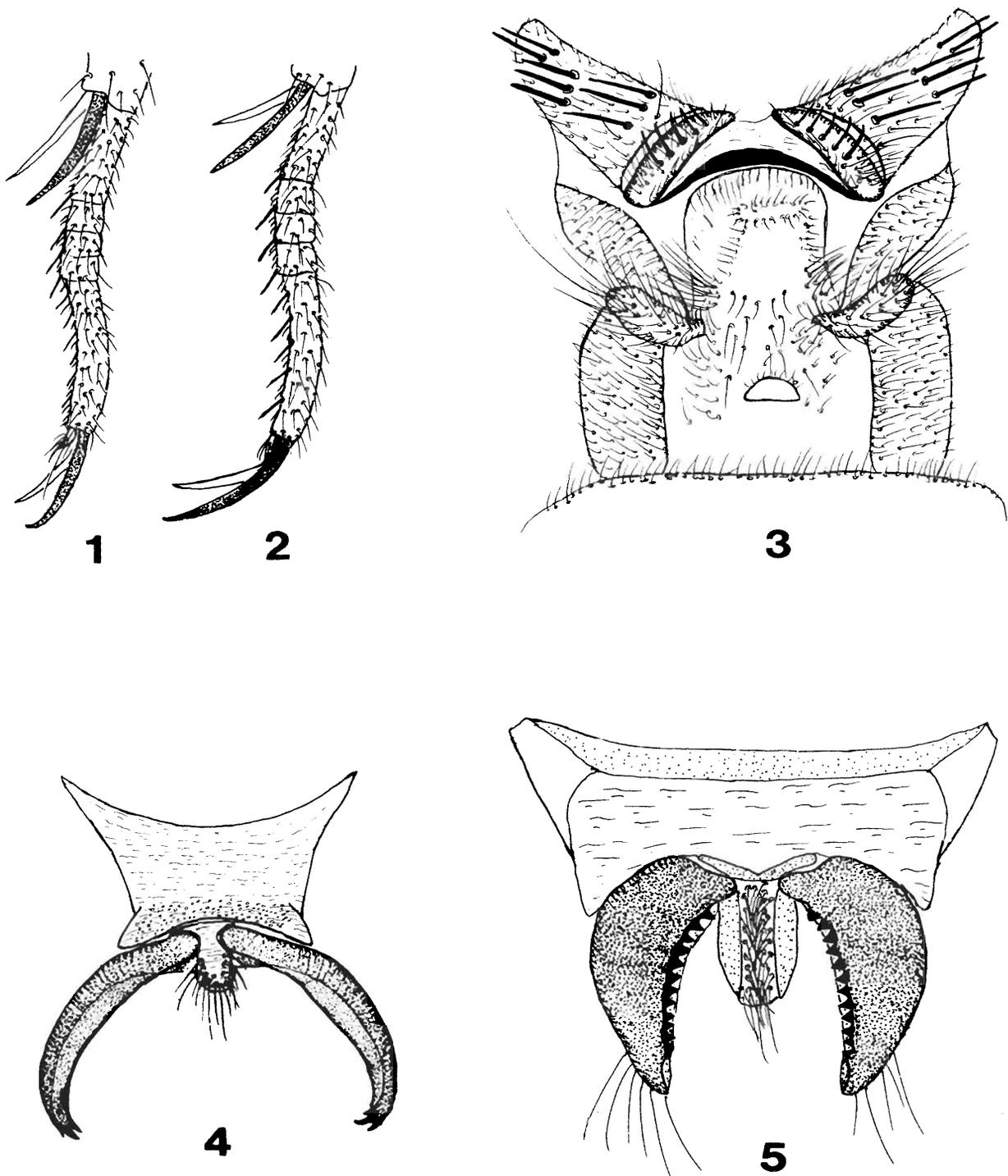
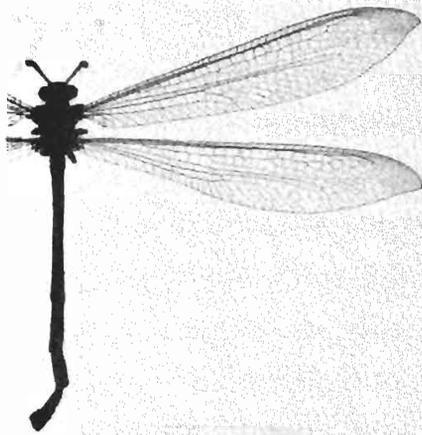
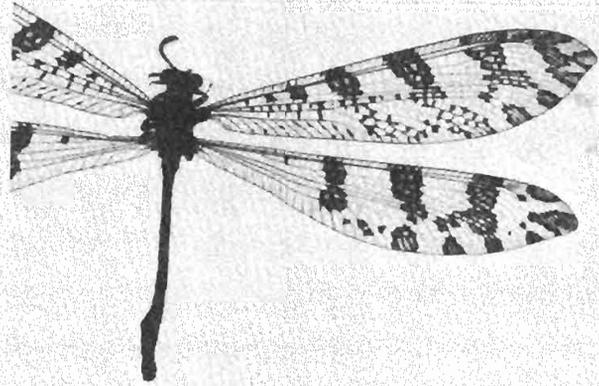


Fig. 1. Hind tarsus of *Millerleon subdolos*; Fig. 2. Hind tarsus of *Dimares elegans*; Fig. 3. Female terminalia (exploded ventral view) of *Millerleon subdolos*; Fig. 4. Male genitalia of *Dimares elegans*; Fig. 5. Male genitalia of *Millerleon subdolos*.

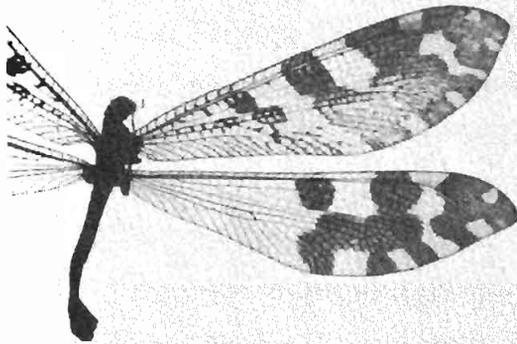
except subbasal dark spot on exterior face of tibia and coxae which are dark basally and posteriorly, with dark stripe on lateral face; abdominal sclerites nearly completely dark brown except pale brown on terminalia; pretarsal claws and tibial spurs reddish brown;



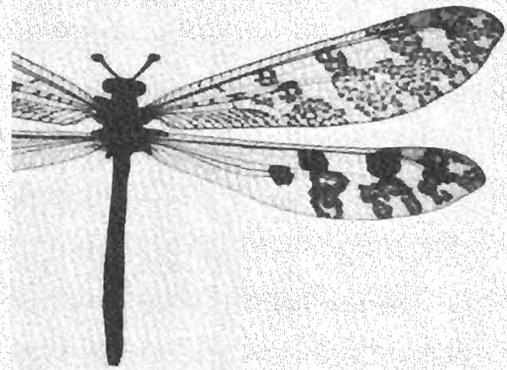
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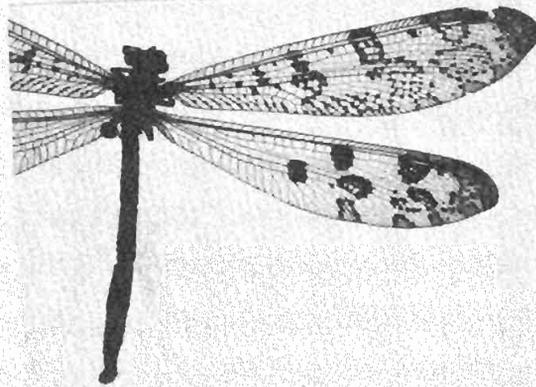
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Figs. 6-10. Wings of Dimarini. 6. *Dimares elegans* (male); 7. *Dimares elegans* (female); 8. *Millerleon subdolosus*; 9. *Millerleon bellulus*; 10. *Millerleon pretiosus*.

wing veins and crossveins nearly all dark brown (males) or pale in non-pigmented areas (females), stigma of males white, sometimes pinkish (Brazil); pronotum with erect black setae on margins; mesoscutum with numerous erect bristles; scutelli with elongate white setae posteriorly; legs with black setae shorter than width of segment at point of origin except a few on hindtibia; femora with longer black setae mostly on closing face, tibiae with black setae on both closing and exterior faces; abdomen with longest setae on tergites I-II and terminalia, elsewhere very short; female ectoproct and lateral gonapophysis with well developed digging setae; male ectoproct with long setae posteriorly. Greatest ocular width much shorter than interocular distance; labial palpus very long, penultimate palpomere longer than distal one, about as long as greatest head width (including eyes); antenna with about 28 flagellomeres, flagellomeres 1-8 longer than wide; pronotum about 2X wider than long; legs about equal length; tibial spurs of hindleg somewhat shorter than basitarsus (Argentina) or longer than basitarsus (Brazil); pretarsal claws shorter than fore basitarsus (Argentina) or almost as long as distal tarsomere (Pernambuco); hindwing about as long as forewing, in repose apex of hindwing extends beyond that of forewing; female usually with extensive brownish suffusion in form of short bands or spots; male wing always without suffusion; male abdomen somewhat longer than wings, without tufted pore plates; female abdomen somewhat shorter than wings; male sternite IX transverse, emarginate medially; male genitalia (Fig. 4), with paramere with 3-4 apical teeth; female terminalia with posterior gonapophysis about as long as wide.

ARGENTINA: *Catamarca*: 6 km S Santa Maria, III.21.1974, L. Stange (2 male, 5 female, 3 larvae-SC); Belen XII.19.1971, C. Porter & L. Stange (2f-SC, IML). Tinogasta, II.8.1966, L. Stange (6m, 2f-SC, IML); *Cordoba*: Dique Los Molinos, I.10.1975, Willink (1f-IML); Sierra, I.10.1927, Williner (1f-SALTA); Villa Dolores, II.7.1965, Kohler (2m-IML); *Entre Rios*: Concordia, Salto Grande, I.1975 (1m-SC); *La Pampa*: Sierra Lihuel Calel, II.1.1968, L. Stange (2m, 1f-SC); *La Rioja*: Campanas, II.1966, L. Stange (1m-SC), Capital, III.6.1970, C. Porter & L. Stange (1m-SC); Mazan, III.14.1969, A. Teran & L. Stange (1m-SC); *Mendoza*: Pareditas (Ruta 40), I.18.1975, A. Willink (1f-IML); *Rio Negro*: Chimpa, I.16.1975, A. Willink (1f-IML); *Salta*: Las Mesitas, II.17.1962, A. Willink (1m-IML), *Santiago del Estero*: Las Termas, I.12.1966, L. Stange (1m-SC); Los Tigres, I.16.1970, R. Golbach (3m-SC, IML), *San Luis*: Lujan, II.23.1966, L. Stange (1m-SC); *San Juan*: Chicuma, I.20.1959 (1f-SC); *Tucuman*: Vipos, III.21.1971, P. Fidalgo (1m-SC); Trancas, (2f-La Plata); BOLIVIA: *Santa Cruz*: El Palmar Oratoria, I.25.1980, L. Stange (1m, 5f-SC)

BRAZIL: *Ceara*: Barbalha, V.1960, M. Alvarenga (2m, 6f-SC); *Goiás*: S. Isabel do Morro, Iha do Bananal, VI.1961, M. Alvarenga (2m, 1f-SC); 48 km., 124 km. S. Peixe, VI.2.1956, F. Truxal (3m, 2f-LACM, SC); *Mato Grosso*: Barracao Queimado, XI.1960, M. Alvarenga (3m, 1f-SC); Gustavo Dutra, Cuiaba, XI.1963, M. Alvarenga (3f-SC); *Pernambuco*: Petrolandia, V.1969, M. Alvarenga (1m, 3f-SC); *Rondonia*: Vilhena, XI.1960, M. Alvarenga (2m-SC).

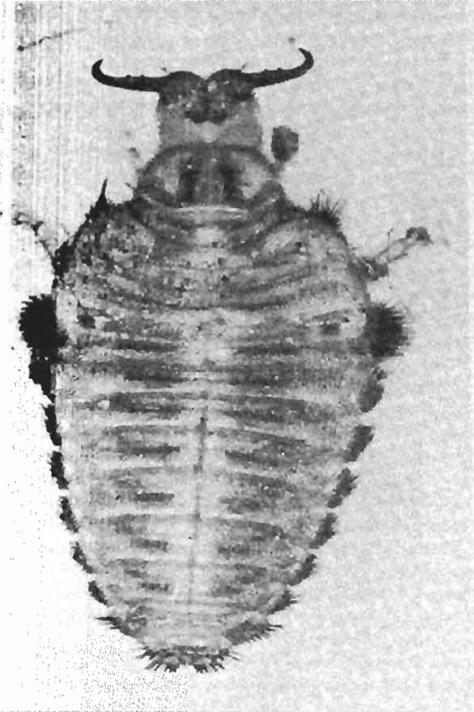
URUGUAY: Arenitas Blancas, II.3.1962, P. San Martin (1f-SC).

Discussion: This species shows geographic variation in its extensive range from Pernambuco, Brazil to Rio Negro, Argentina. The populations occurring in the Subandean Desert and Chaco of Argentina have somewhat less extensive wing markings in the female than most of the populations occurring in Brazil. Also, the stigma is white

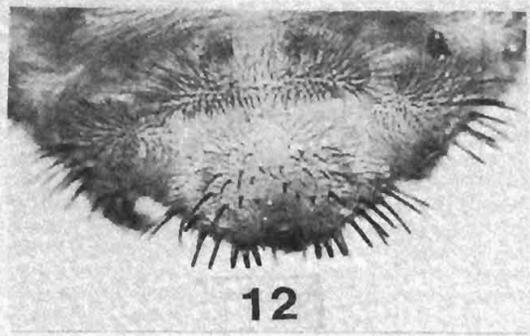


Fig. 11-14. Third instar larva of *Millerleon bellulus*. 11. Dorsal view; 12 Ventral view of abdominal apex; 13. Ventral view of head; 14. Ventral view.

Fig. 15. Third instar larva of *Dimares elegans* (Ventral view).



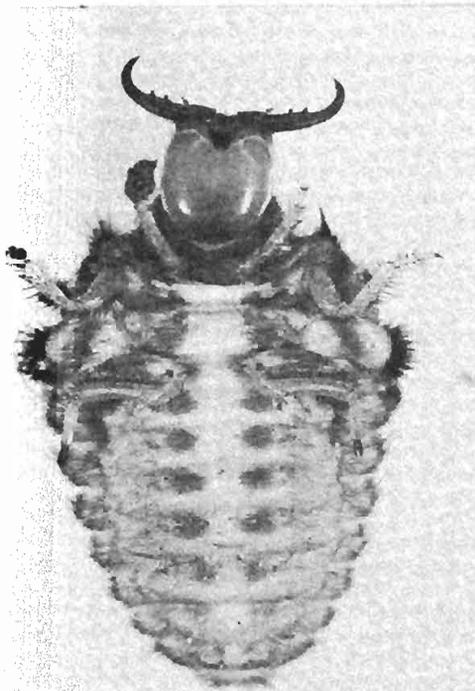
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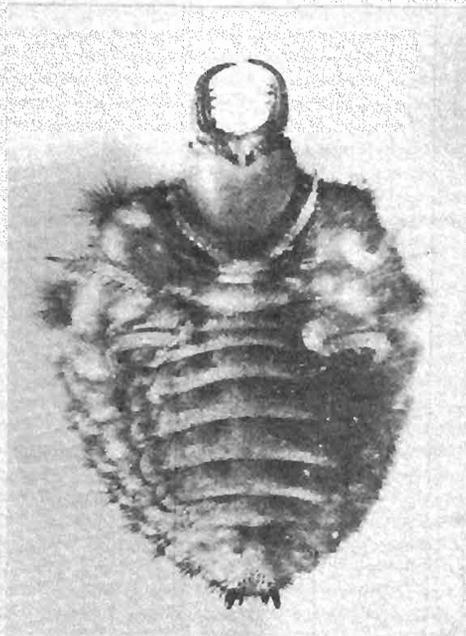
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in the Argentina males often somewhat reddish in the Brazilian populations. Specimens seen from Pernambuco, Brazil, appear to have less extensive wing markings in the females. About 10% of the females have the wing markings much reduced or even absent. The tibial spurs are shorter than the hind basitarsus in the Argentine populations whereas in Bolivia and Brazil they are longer than the hind basitarsus. This may be clinal variation since the northernmost populations from Pernambuco appear to have the best developed tibial spurs and pretarsal claws. The male genitalia are very similar among all of these populations, with slight differences in the length and width of the paramere hook.

Biology: Larvae (Fig. 15) of *Dimares elegans* were found in fairly deep sand between sand dunes in Argentina. The larvae move slowly, both backwards and forwards. They were not reared but their structural characteristics identify them with a high probability of accuracy.

*Millerleon* Stange, new genus  
(Figs. 1, 3, 5, 8-14)

Type-species: *Myrmeleon subdolos* Walker, by present designation.

Description: ADULTS: Sexual dichromatism absent males and females with equivalent wing markings; frons without setae; distal labial palpomere with slit-like opening extending around apex to opposite side; basitarsus of foreleg at least 3.0X longer than middle diameter of tarsus; hind tibial spurs shorter than basitarsus; pretarsal claws no longer than hind basitarsus; male pilula axillaris present; base of hindwing posterior vein and male pilula axillaris with elongate hair-like setae; male paramere without hook, 12 or more teeth along mesal margin of paramere; female terminalia with small sclerotized pregenital plate (Fig. 3); gonapophyseal plate absent. LARVA: mandible with 2 teeth; ventral head capsule nearly glabrous; sternite VIII without submedian tooth; sternite IX without highly modified digging setae posteriorly.

Discussion: There appear to be 3 described species. The species are very similar structurally with identical male genitalia. There are differences in the wing shape, and to a lesser degree, the wing markings which vary considerably. Tegumental characters of the male abdomen appear to be important differences between species. More specimens and study are needed to clarify the species definitions in this genus. All the species are restricted to the Peruvian coastal desert (south Ecuador to northern Chile). This genus is named for Robert Bruce Miller in recognition of his outstanding field work with larval and adult antlions.

Key to Species of *Millerleon* Stange

1. Hindwing less than 3.5X longer than greatest width which occurs about midpoint of wing (Fig. 8); apical one-fifth of wing mostly with solid dark brown bands, most of hypostigmatic cell completely dark brown suffused; male abdomen with most tergites and sternites (especially toward posterior end) with numerous pore plates, mainly associated with setal bases, giving abdomen a scaly appearance; south Ecuador to central Peru ..... *subdolos* (Walker)
- Hindwing more than 4.0X longer than greatest width which occurs well beyond midpoint of wing (Figs. 9, 10); apical one-fifth of wing mostly pale brown with numerous dark brown suffused areas, hypostigmatic cell mostly not suffused; male abdomen without tufted pore plates at least beyond tergite III usually smooth toward posterior end ..... 2

2. Male pilula axillaris with head bearing setal mat about 3.0X wider than base of pedicel; forefemur dark brown; south Peru to north Chile ... *pretiosus* (Banks)  
 Male pilula axillaris with head about 2.0X wider than base of pedicel; forefemur light brown; south Ecuador to central Peru ..... *bellulus* (Banks)

*Millerleon bellulus* (Banks) 1908, New Combination  
 (Figs. 9, 11-14)

1908. *Dimares bellulus* Banks Proc. ent. Soc. Wash. 9:30. Holotype, Posorja, Ecuador (MCZ).

1913. *Dimares amoenus* Navas, Mis. Arc Mer. Equatorial Amer. Sud 10(1):70. Syn-types: 1f, Ecuador, Staudinger & Rolle (Barcelona) 2m, Perou, Paita et tablazo de Paita 50-80m, P. Rivet, 1906 (Paris). New synonymy.

Diagnosis: Forefemur light brown; hindwing about 4.0X longer than greatest width, which occurs well beyond midpoint of wing; apical one-fifth of wing mostly pale brown with numerous dark brown suffused areas; hypostigmatic cell mostly not suffused; male pilula axillaris with head about 2.0X wider than base of pedicel; abdomen dull with pale spicules on most sternites and tergites, dark brown tufted pore plates only on tergites and sternites I-III.

Material examined: ECUADOR. *Guayas*: 27 mi. N. Santa Elena, I.30.1955, E. Schlinger & E. Ross (2m-CAS, SC); Posorja, III, Campos (Im-SC), PERU. *Piura*: Puerto Pizarro, 14 km. N. Tumbes, V.6.1959, W. Weyrauch (4m 5f- IML, SC); *Lambayeque*: 14 km. N. Mocupe VII.1985, R. B. Miller & L. A. Stange (2 reared females—4 larvae-SC, MC), *La Libertad*, Pacasmayo, V.6.1959, W. Weyrauch (1f-SC).

Biology: Larvae (Fig. 11) were found about 18 inches under loose sand that accumulated in animal burrows. These special holes, usually found around small bushes or bases of small sand dunes, have a lot of organic debris (mostly leaves) and a variety of beetle larvae. Larvae feed underground. A photograph of one of the habitats is published in Stange (1984, Fig. 2). These larvae are very sluggish, but move forwards and backwards. Only 2 larvae were reared after 3 years in the laboratory. The time period in the cocoon was 14 or 33 days. The adult lived 8 days after emerging without benefit of food.

*Millerleon pretiosus* (Banks) New Combination  
 (Fig. 10)

1908. *Dimares pretiosus* Banks. Journal New York Ent. Soc. 17:1. Holotype, Mollendo, Peru, December (MCZ).

Diagnosis: Forefemur dark brown; hindwing about 4.0X longer than greatest width which occurs well beyond midpoint of wing; apical one-fifth of wing mostly pale brown with numerous dark brown suffused areas; hypostigmatic cell mostly not suffused; male pilula axillaris with head about 3.0X wider than base of pedicel., abdominal tergites I-II dull brown with pale spicules; tergites III-VII mostly shiny brown.

Material examined: CHILE. *Tarapaca*: Cuya, Quebrada de Camarones, Arica II.25.1976, N. Hitchins (1 male-FSCA); km 12, Valle de Azapa, Arica, III.6-23.1977, N. Hitchins (1m-FSCA); Azapa Grande, II.7.1964 (1m, 1f-FSCA); Azapa, II.20, 1948 (2f-FSCA).

Systematics: The abdominal tegumental sculpture is different from *M. subdulus* and from *M. bellulus*. The longer wings and other details point to a closer association with *M. bellulus* but the larger male pilula axillaris is a notable difference from that species.

*Millerleon subdolus* (Walker) New Combination  
(Figs. 1, 3, 5, 8)

*Myrmeleon subdolus* Walker 1853. List Neuropterous insects British Museum p. 395.  
Holotype, Lima, Walker Coll. (BM!)

*Dimares formosus* Banks 1908. Proc. ent. Soc. Washington 9:31. New synonym.  
Holotype, Posorja, Ecuador, Campos (MCZ).

*Dimares venustus* Banks 1908. Proc. ent. Soc. Washington 9:31. New synonym.  
Holotype, Posorja, Ecuador, Campos (MCZ).

*Dimares nummatus* Navas 1912. Ann. Soc. Scient. Bruxelles 36:229, Fig. 16 (hindwing)  
(after Stange 1969:189). Holotype male, S. Elena, Ecuador (not Galapagos!), 1,  
4.II.1876 (Vienna!)

*Dimares decorus* Navas 1913. Mission géographique Acad. Sci. 10:69, Pl. iv, Fig. 6  
(hindwing). New synonym. Holotype, Paita et Tablazo de Parita, Peru, 50-80 m,  
1906, P. Rivet (Paris)

*Dimares formosus punana* Navas 1933. Acad. Cienc. Nat. Madrid 29:196 Fig. 15  
(hindwing). New synonym. Syntypes, Puna Vieja, Ecuador, Campos (Barcelona)

Taxonomy: Hagen 1860:360 (in *Palpares*); 1866:403 (in *Dimares*; McLachlan 1867:281  
(*subdolus* not = *elegans*); Esben-Petersen 1920:491 (nummatus = formosus)

Distribution: Ecuador (Campos 1922:72; Navas 1935:361).

Diagnosis: Forefemur yellowish brown; hindwing less than 3.5X longer than greatest  
width which occurs about midpoint of wing; apical one-fifth of wing mostly with solid  
dark brown bands, most of hypostigmatic cell completely dark brown suffused; male  
pilula axillaris with head about 3.0X wider than base of pedicel; male abdomen with  
most tergites and sternites (especially toward posterior end) with numerous pore plates,  
mainly associated with setal bases, giving abdomen a scaly appearance.

Material examined: ECUADOR. *Guayas*: Playas, II.26.1973, M. Deyrup (1m-FSCA),  
Puerto Grande, Isla Puna, Gulf of Guayaquil, II.1936 Campos (-1m, 4f-FSCA); Posorja.  
III Campos (2m 1f-FSCA); Pt. Calera, IV.21,1968, E. Ball (1f-FSCA).

PERU. *Lambayaque*. 40 mi. N. Chiclayo I.17.1955, E. Schlinger & E. Ross (2m, CAS,  
FSCA); *Tumbes*: Puerto Pizarro, 14 km. N. Tumbes, V.6.1959, W. Weyrauch (3f, IML;  
FSCA).

Systematics: The broader wings and more extensive dark suffusion (Fig. 8) renders  
this species distinctive in the genus. The male is distinguished from other species by  
the abundance of tufted pore plates on the abdominal tergites giving the whole dorsum  
of the abdomen a scaly appearance.

ENDNOTE

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Department of Agriculture and Consumer Services, Gainesville, Florida.

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