

TWO NEW SPECIES OF *NYCTELIA* LATREILLE FROM WESTERN ARGENTINA, WITH ZOOGEOGRAPHICAL AND ECOLOGICAL REMARKS ON THE HIGH MOUNTAIN HABITAT (COLEOPTERA: TENEBRIONIDAE)

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Abstract.— Two new species of the genus *Nyctelia* Latreille (Pimeliinae: Nycteliini) from high mountains in central-western Argentina are described, *N. nevadoensis* sp. nov. and *N. setipennis* sp. nov. Distributional and habitat records and habitus photographs for these two new species are included, with comparisons to other known species of the genus. A discussion on the biogeography and the non sympatry with other species of *Nyctelia* of these two new species is presented. Lectotype is designated for *Nyctelia alutacea* Fairmaire, 1876.



Key words.— Coleoptera, Tenebrionidae, Nycteliini, *Nyctelia*, new species, distribution, biogeography.

INTRODUCTION

The genus *Nyctelia* Latreille, 1825 belongs to the Nycteliini, a Neotropical tribe of Pimeliinae with 298 species arranged in 12 genera endemic to arid and semiarid lands of southern South America (Flores 1997, 1999, Flores and Vidal, 2000, Flores and Triplehorn, 2002). *Nyctelia* comprises 65 species (Kulzer 1963) distributed from northwestern Argentina and central Chile to the southern part of Patagonia in Argentina and central Chile, with one species reaching Uruguay (Flores 1997). Species of *Nyctelia* inhabit the biogeographic provinces Patagonia Central, Monte, Prepuna, Santiago, Maule and Pampa (Morrone 2001) being dominant among the tenebrionid fauna in the Patagonian steppes (Kuschel 1969), with more than two species frequently being found in sympatry (Peña 1963).

Within the research project "Diversity of arthropods in high mountains in central-western Argentina" we conducted several sampling explorations using pitfall traps.

In two different environments in Mendoza province, we found specimens that belong to two new species of *Nyctelia* that we describe in this paper, with distributional and habitat records and biogeographic comments. The known distributional range of the genus is from sea level to an altitude of 2400 meters (Flores 1997). These two new species of *Nyctelia* inhabit high altitudes exclusively between 1500 and 3100 m, extending the altitude range of the genus. In addition, in the same research project we found specimens of *N. plicatipennis* Lacordaire, 1830 at altitudes up to 3000 m.

Finally, we examined the distribution of *N. plicatipennis*, *N. laevis* Waterhouse and *N. alutacea* Fairmaire, 1876 in relation to these two new species. In the Muséum National d'Histoire Naturelle, Paris, France we studied the type of *N. alutacea* to compare with the specimens of one of these new species and to confirm that it is different to *N. alutacea*. To fix the current interpretation and to ensure stability, we have designated lectotype for *N. alutacea* Fairmaire (Appendix).

MATERIAL AND METHODS

Type specimens are deposited in the following collections (we follow Arnett *et al.* 1993 where possible for collections codens):

- BMNH – The Natural History Museum, London, UK;
- FMNH – Museum of Natural History, Chicago, USA;
- HNHM – Hungarian Natural History Museum, Budapest, Hungary;
- IADIZA – Instituto Argentino de Investigaciones de las Zonas Áridas, Mendoza, Argentina;
- IMLA – Fundación e Instituto Miguel Lillo, San Miguel de Tucumán, Argentina;
- LEULS – Laboratorio de Entomología Ecológica, Universidad de La Serena, La Serena, Chile;
- MACN – Museo Argentino de Ciencias Naturales Bernardino Rivadavia, Buenos Aires, Argentina;
- MLPA – Museo de La Plata, La Plata, Argentina;
- MNHN – Muséum National d'Histoire Naturelle, Paris, France;
- MNNC – Museo Nacional de Historia Natural, Santiago, Chile;
- NHMB – Natural History Museum, Basel, Switzerland;
- UCCC – Universidad de Concepción, Concepción, Chile;
- USNM – National Museum of Natural History, Smithsonian Institution, Washington, DC, USA.

Body length was measured dorsally, along the midline, from anterior margin of labrum to elytral apex. Pronotum is defined as narrow if width/length at mid-point (W/L) is < 2.0 ; and as wide if the same ratio is ≥ 2.0 . Measurements were taken using a filar micrometer. For basal piece of tegmen/parameres length, and median lobe/tegmen length the ratios proposed by Flores (1996) were used. Dissection methods are those used by Tschinkel and Doyen (1980) for genital structures. Drawings were made with a camera lucida adapted to a stereoscopic microscope. Exact label data are cited on separate labels indicated in brackets. For the distribution of these new species we used the biogeographic classification of Morrone *et al.* (2002) and Roig Juárez *et al.* (2003).

TAXONOMY

Nyctelia nevadoensis sp. nov.

(Figs 1, 3–4, 7–8)

Diagnosis. Clypeus with two lateral depressions; pronotum without punctures on disc, dorsal part of lateral margin with shallow groove, pronotum widest at

base; elytron with 10–12 deep, straight transverse grooves reaching its half, elytral suture sunken only in anterior half, without adjacent elevated longitudinal areas.

N. nevadoensis superficially resembles *N. alutacea* and *N. blapoides* Fairmaire, 1905. In *N. nevadoensis* the pronotum is smooth, without punctures on disc, widest at base and the elytron has deep transverse grooves reaching its half; in *N. alutacea* the pronotum is distinctly punctate, widest at mid-point and the elytron has shallow transverse grooves reaching only one outer third. *N. nevadoensis* differs from *N. blapoides* by having elytron with straight transverse grooves (in *N. blapoides* the transverse grooves of elytron are sinuate) and elytral suture sunken only in anterior half, without adjacent elevated longitudinal areas (in *N. blapoides* the elytral suture is sunken on all its length, with two adjacent elevated longitudinal areas).

Description. Length 12.69–18.47 mm ($n = 82$). Body black, antennae, legs black to dark brown.

Head. Clypeus glabrous, with sparse small punctures, with two lateral depressions; clypeal suture shallow, with abundant small punctures; frons glabrous, without punctures; antennae reaching middle of lateral margin of pronotum.

Thorax. Pronotum glabrous, wide ($W/L \geq 2.0$), smooth, without punctures on disc, with only very few small punctures near lateral margin, without depressions, anterior margin conspicuous, dorsal part of lateral margin with shallow groove, pronotum widest at base, posterior margin as wide as base of elytra (Fig. 1); proepisternum with abundant long setae; prosternal process rounded, expanded distally.

Elytra arched, glabrous, with short setae only on posterior area, without terminal apophysis, entire surface rugose, without protuberances; with 10–12 deep, straight transverse grooves reaching elytron half, intervals wide, convex; suture sunken only in anterior half, without adjacent elevated longitudinal areas (Fig. 1); lateral margin thin, flat, sinuate, with edge, not crenulated; pseudopleuron smooth, glabrous; epipleuron smooth, glabrous, conspicuous with edge on anterior half, anterior quarter three times as wide as posterior half.

Legs. Profemora with a tuft of setae on dorsal surface, with row of setae on ventral surface; meso, metafemora almost glabrous. Tibiae not crenulated.

Male genitalia. Basal piece of tegmen short ($B/E \leq 1.00$); parameres of tegmen with apex narrow, proximal margin ventrally bisinuate, widest at base, with setae on distal 1/5 of ventral surface (Fig. 4); median lobe moderate ($0.75 < L/T \leq 1.00$), with apical aperture large, base convex, with apex rounded, one third the width in respect to parameres of tegmen, proximally not broadened (Fig. 3).

Etymology. Named *nevadoensis* because this species inhabits the high mountain Cerro Nevado over a great altitudinal range.

Type material. Holotype, male: [Argentina. Mendoza/ Dto. Malargüe/ El Nevado 2908 m/ G. Flores-G. Debandi/pitfall 6-16-XII-2004] [35°36'11.4"S, 68°30'48.9"W] [*Nyctelia nevadoensis* n. sp./ HOLOTYPUS male/ Det. G. Flores and/R. Carrara 2006] (IADIZA). Allotype, female (IADIZA) and 26 paratypes with the same data as holotype (14 IADIZA, 2 FMNH, 2 HNHN, 2 MNHN, 2 MNNC, 2 NHMB, 2 BMNH); nine paratypes with the same data as holotype, except: El Nevado 2688 m and 35°36'33.6"S, 68°31'37.8"W (IADIZA); 17 paratypes with the same data as holotype, except: El Nevado 3036 m and 35°35'53.0"S, 68°30'34.4"W (11 IADIZA, 2 USNM, 2 LEULS, 2 MACN); six paratypes with the same data as holotype, except: El Nevado 2361 m and 35°37'40.5"S, 68°32'39.5"W (IADIZA); four paratypes with the same data as holotype, except: El Nevado 2590 m, 35°36'57.2"S, 68°31'42.7"W and 7-I-2006 G. Debandi (IADIZA); two paratypes with the same data as holotype, except: El Nevado 2925 m, 35°36'06"S, 68°30'51"W and 7-I-2006 G. Debandi (IADIZA); nine paratypes with the same data as holotype, except: El

Nevado 2342 m, 35°37'44"S, 68°32'40"W and 16-XII-2004 G. Flores coll. (3 IADIZA, 2 IMLA, 2 MLPA, 2 UCCC); one paratype: [Argentina. Mendoza/ Dto. Malargüe/ Río Grande 1950 m/ 19-III-1997 R. González] [35°23'20"S, 70°16'26"W] (IADIZA); one paratype: [Argentina. Mendoza/ Dto. Malargüe Valle de/ Las Leñas 2700 m/ 17-II-1996 I. Peralta] [35°12'55"S, 70°05'38.4"W] (IADIZA); one paratype: [Argentina. Mendoza/ Dto. Malargüe/ Valle de Las Leñas/ 18-II-1999 C. Borghi] [35°12'17"S, 70°01'39.7"W] (IADIZA); seven paratypes: [Argentina. Mendoza/ Dto. San Carlos Reserva/ Laguna del Diamante 2324 m/ G. Flores-G. Debandi/ pitfall 8-18-II-2005] [34°14'45.7"S, 69°22'50.8"W] (IADIZA).

Distribution. Argentina: Mendoza: Dto. Malargüe, San Rafael and San Carlos.

Nyctelia setipennis sp. nov.
(Figs 2, 5, 6, 7, 9)

Diagnosis. Pronotum with abundant large punctures on entire surface, dorsal part of lateral margin without groove, pronotum widest at mid-point; elytra with abundant protuberances on entire surface, with



Figures 1-2. (1) Habitus of *Nyctelia nevadoensis* sp. nov. and (2) *N. setipennis* sp. nov.

terminal apophysis semicircular, with short stout setae on posterior area, and with 9–11 deep, sinuate transverse grooves reaching elytron half; pseudopleuron with abundant protuberances on entire surface, each bearing a short stout seta.

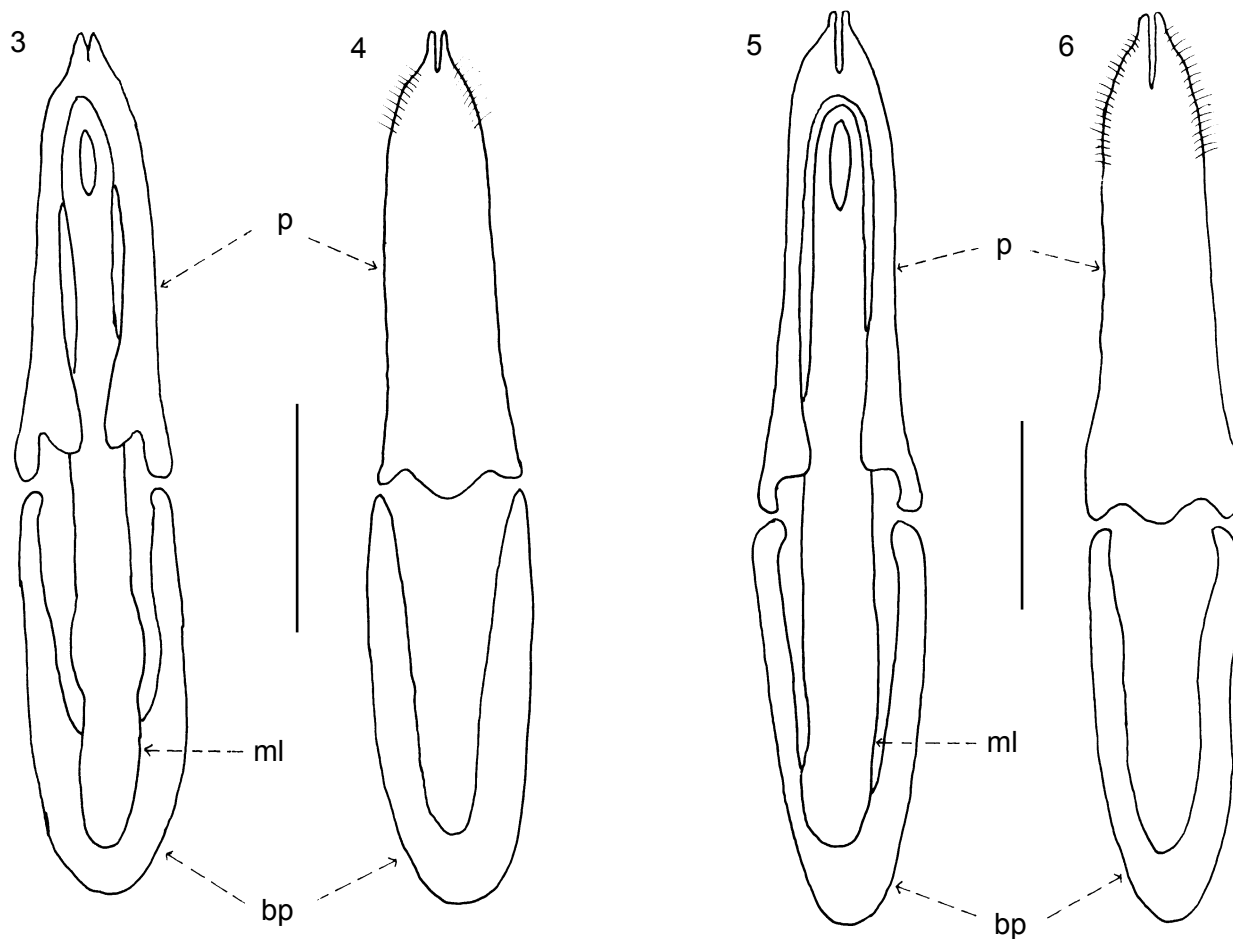
N. setipennis closely resembles *N. plicatipennis* Lacordaire and *N. subsulcata* Waterhouse, 1841. *N. setipennis* differs from these species by having the pronotum with two depressions in posterior half, by the elytra with a semicircular terminal apophysis, by stout setae on posterior area and on the pseudopleuron, and by elytral protuberances equal in diameter to pronotal punctures; in *N. plicatipennis* and *N. subsulcata* the pronotum lacks the two depressions in posterior half, the elytra lack a terminal apophysis, as well as stout setae on posterior area and on pseudopleuron, and the pronotal punctures are two times the diameter of the elytral protuberances. *N. setipennis* is the only species with terminal semicircular apophysis on the elytra not inhabiting Patagonian steppes.

Description. Length 16.56–20.67 mm (n = 29). Body black, antennae and legs black to dark brown.

Head. Clypeus, clypeal suture with abundant large, deep punctures, each with a central seta, with two lateral depressions; clypeal suture shallow; frons with sparse small punctures, each with a central seta; antennae reaching middle of lateral margin of pronotum.

Thorax. Pronotum glabrous, narrow (W/L 2.0), surface with abundant large, deep punctures, with two depressions in posterior half, anterior margin conspicuous, dorsal aspect of lateral margin without groove, pronotum widest at mid-point, posterior margin as wide as base of elytra (Fig. 2); proepisternum with sparse or abundant long setae; prosternal process rounded, expanded at middle.

Elytra arched, with terminal apophysis semicircular, with stout short setae on posterior area arising on protuberances more abundant on the apophysis, entire surface rugose, with abundant protuberances; with 9–11 deep, sinuate transverse grooves reaching elytron half, intervals wide, convex; suture sunken only on anterior quarter, without adjacent elevated longitudinal areas (Fig. 2); lateral margin thick, flat, sinuate, without edge, not crenulated; pseudopleuron with



Figures 3–6. Male genitalia of *Nyctelia* spp. in dorsal and ventral views. (3–4) *N. nevadoensis* sp. nov.; (5–6) *N. setipennis* sp. nov. (bp – basal piece of tegmen, p – parameres of tegmen, ml – median lobe). Scale bars 1 mm.

abundant protuberances on entire surface, each bearing a short, stout seta; epipleuron smooth, glabrous, conspicuous with edge on anterior third, anterior quarter three times as wide as posterior half.

Legs. Profemora with or without a tuft of setae on dorsal surface, without row of setae on ventral surface; meso, metafemora almost glabrous. Tibiae not crenulated.

Male genitalia. Basal piece of tegmen short ($B/E \leq 1.00$); parameres of tegmen with apex narrow, proximal margin ventrally bisinuate, widest at base, with setae on distal 1/4 of ventral surface (Fig. 6); median lobe moderate ($0.75 < L/T \leq 1.00$), apical aperture large, base convex, apex rounded, one third the width in respect to parameres of tegmen, proximally not broadened (Fig. 5).

Etymology. Named *setipennis* because of the abundant short stout setae on posterior area of elytra and on pseudopleuron.

Type material. [Argentina. Mendoza/ Dto. Las Heras 2824 m/ 7 km E of Paramillos/G. Flores-S. Claver/ pitfall 6–16-XII-2004] [32°30' 02.7"S, 69°04'03.2"W] [*Nyctelia setipennis* n. sp./ HOLOTYPUS male/ Det. G. Flores and/ R. Carrara 2006] (IADIZA). Allotype, female (IADIZA) with the same data as holotype except: 32°30'02.9"S, 69°04'00.4"W (IADIZA). Seven paratypes with the same data as holotype (3 IADIZA, 1 BMNH, 1 FMNH, 1 HNMH, 1 MACN); three paratypes with the same data as allotype (IADIZA); two paratypes with the same data as holotype except: 32°30'02.3"S, 69°03'59.4"W (IADIZA); five paratypes with the same data as holotype except: 32°30'02.4"S, 69°03'59.9"W (2 IADIZA, 1 MNHN, 2 MNNC); four paratypes with the same data as holotype except: 32°30'01.0"S, 69°03'58.7"W (2 IADIZA, 2 NHMB); five paratypes with the same data as holotype except: 32°29'79"S, 69°03'91"W, 4-XII-2004, G. Flores (IADIZA). Paratypes: [Argentina. Mendoza/ Dto. Las Heras 2958 m/ Paramillos Uspallata/ S. Roig/ 10-II-2005] [32°29.157"S, 69°06.938"W] (1 IADIZA); [Argentina. Mendoza/ Dto. Las Heras/ 5 km E of Villavicencio/ 1450 m 14-I-1999/G. Flores] [32°31.98'S, 68°59.26'W] (1 IADIZA); [Argentina/ 57 km NW of Mendoza 2800 m/ Capdevila] [16-XII-1967/ under stones in/ Paramillo zone/ R. D. Sope leg.] (1 USNM); [Uspallata/ Mendoza/ XI- 1973 coll. A. Roig] (1 IADIZA).

Material examined. Argentina: Mendoza: Dto. Las Heras: 6 km E of Paramillos Uspallata (El Balcón), 2750 m, 14-I-1999, G. Flores, [32°29'11"S, 69°03'33.8"W] (1 IADIZA), 4 km E of Paramillos Uspallata, 2800 m, 14-I-1999, G. Flores, S. Roig, S. Lagos, [35°12'55"S, 69°05'38.4"W] (1 IADIZA), 16 km W of Villavicencio, 2660 m, 27-XI-2003, G. Flores, [32°27'28"S, 69°02'12.4"W] (1 IADIZA).

Distribution. Argentina: Mendoza: Dto. Las Heras.

ECOLOGY AND ZOOGEOGRAPHY

N. nevadoensis occurs in southern Mendoza province, in the Payunia district of the Central Patagonia biogeographic province (Morrone *et al.* 2002). This species is restricted to high altitude environments between 1950 and 3036 meters in two isolated areas. One of these areas is on the eastern slope of the Andes in which *N. nevadoensis* is known for about 200 km along its length between 34 and 36 degrees south parallel. The second area is on the western slope of the extra-Andean mountainous range (Cerro Nevado) located 200 km East of the Andes.

On the eastern Andean slope, *N. nevadoensis* ranges between 1950 and 2700 meters, inhabiting two environments: i) Río Grande and Las Leñas valleys (Fig 7, dots I and II) with foothill vegetation characterized by *Mulinum spinosum* (Cav.) Pers. (Apiaceae), *Senna arnottiana* (Gillies ex Hook.) H. S. Irwin and Barneby (Fabaceae) and *Stillingia patagonica* (Speg.) Pax and K. Hoffm. (Euphorbiaceae); ii) Reserva Laguna del Diamante (Fig 7, dot III) where it inhabits the lower altitudes (2300–2400 meters) characterized by a community of nanophanerophytous plants such as *Adesmia pinnifolia* Gillies ex Hook. and Arn., *A. schneideri* Phill. (Fabaceae) and *A. obovata* Clos (Fabaceae) and grasslands of *Poa* spp. (Poaceae) and *Stipa* spp. (Poaceae).

The Cerro Nevado is independent of the Cordillera de Los Andes, extending North-South between 34 and 36 degrees south parallel, with a maximum altitude of 3833 m. In Cerro Nevado, *N. nevadoensis* is known from within an altitudinal range of 2361 m to 3036 m (Fig. 7). In the lower part of this range, the vegetation is a shrub steppe of *Neospartan aphyllum* Gillies and Hook. (Verbenaceae) and *Sporobolus rigens* (Trinius) Desvauz (Gramineae) on sandy and basaltic soils. At medium level (volcanic plateau) the steppe is characterized by *Adesmia pinnifolia* Gillies ex Hook. and Arn. (Fabaceae) and *Anarthrophyllum rigidum* Hieronymus (Leguminosae). The top level presents lower vegetation with *Panthacantha ameghinoi* Spegazzini (Solanaceae) as a dominant species.

Both areas (the eastern slope of the Andes and the extra-Andean Cerro Nevado) are separated by 200 km of steppe on a high plateau of 1800 meters where *N. nevadoensis* is not present but in which *N. alutacea* Fairmaire is widely distributed (Fig. 8). In our samples and in the abundant material of *Nyctelia* housed at IADIZA there is no sympatry recorded between these two species, which gives evidence of the altitudinal restriction of *N. nevadoensis*. However, *N. laevis* Waterhouse is sympatric with both species, *N. nevadoensis* and *N. alutacea*. *N. laevis* shares the low area of distribution of *N. nevadoensis* (1950 to 2400 m) and inhabits the Patagonian steppes sharing most

of the distribution area of *N. alutacea* (Fig. 8) at altitudes between 1800 to 2000 m.

Another tenebrionid beetle belonging to the tribe Praocini (*Falsopraocis australis* Flores, 2000) is present in the high altitude environment above 3000 meters in Cerro Nevado (this sampling) and on the Andean eastern slope above 3000 meters (Flores 2000 and sampling in Reserva Laguna del Diamante). *Nyctelia nevadoensis* and *Falsopraocis australis* display a similar pattern of distribution restricted to high elevation environments in the Andean and extra-Andean Cerro Nevado. In addition, as a result of this sampling, other Coleoptera species as Carabidae were found to have this altitudinal pattern, being endemic to high altitude in Cerro Nevado: a recently described species of *Trechisibus* Jeannel, 1962 was found restricted to above 3000 meters (Roig-Juñent & Sallenave 2005) and two new species of *Barypus* Dejean, 1828 and *Cnemalobus* Guérin-Ménéville, 1838 are between 2100 and 3000 meters (Sergio Roig-Juñent, pers. comm.).

Only the Reserva Laguna del Diamante population of *Nyctelia nevadoensis* is located within a protected area. We recommend the creation of a reserve in Cerro Nevado due to the many endemic species restricted to this high altitude.

On the other hand, *Nyctelia setipennis* inhabits northwestern Mendoza in a restricted area on the 32° South parallel between 1500 and 3000 meters, on the eastern slope of the Precordillera, an extra-Andean mountainous system located 50 km East of the Andean mountain range (Fig. 7). Its distribution falls within the biogeographic provinces of Puna and Prepuna (Roig Juñent *et al.* 2003).

The Puna area is framed between 2700 and 3000 meters on both slopes of the Precordillera (eastern and western). It is characterized by a cold, dry climate, where the main climatic effect is cryoturbation in winter. The Puna consists of grasslands and arid bush steppes, with bushes between 40–150 cm of height such as: *Lycium chanar* Phil. (Solanaceae), *L. fuscum* Miers (Solanaceae), *Ephedra multiflora* Phil. ex Stapf (Ephedraceae), *Verbena diversifolia* Kuntze (Verbenaceae), *Baccharis thymifolia* Hook. and Arn. (Asteraceae), and *B. polifolia* Griseb (Asteraceae) (Roig and Martínez Carretero 1998); the rest of the ground is bare and receives high solar irradiation. In Mendoza, the Prepuna is restricted to the eastern slope of the Precordillera between 1500 and 2700 meters (Roig Juñent *et al.* 2003, Fig. 1). The Prepuna is characterized by plants of the Monte central district and numerous endemics such as: *Ephedra andina* Poepp. and Endl. (Ephedraceae), *Bulnesia retama* (H. et A.) Griseb (Zygophyllaceae), *Bredemeyera colletioides* (Phil.) Chodat (Polygalaceae.), and species of *Opuntia* (L) Mill. and *Echinopsis* Zucc. (Cactaceae) (Hauman 1947).

N. setipennis is restricted to the eastern slope and top of the Precordillera. On the western slope, it is replaced by *N. plicatipennis* Lacordaire (Fig. 9), which inhabits the Monte biogeographic province in the Uspallata-Calingasta valley (Roig Juñent *et al.* 2001) and Puna biogeographic province (Roig Juñent *et al.* 2003, Fig. 1). Because of this distribution, *N. setipennis* and *N. plicatipennis* are allopatric species. This pattern of distribution is also found in *Psectracelis* Solier, 1836: *P. semistrigosa* Fairmaire, 1903 on the eastern slope and top of the Precordillera (Prepuna and Puna), whereas *P. deplanata* (Lacordaire, 1830) on the western slope of the Precordillera (Monte and Puna) (Flores and Gómez 2005). These shared distribution patterns suggest the presence of historical and current factors acting on the selection pressures of distribution of the species in both genera.

The known distribution of *Nyctelia setipennis* falls entirely within a protected area, the Reserva Natural Villavicencio, where it inhabits declared zones of controlled limited and restricted use with maximum protection requirements (Dalmasso *et al.* 1999).

Sympatry in *Nyctelia*: two or three species (Peña 1963), up to six species (collection data, IADIZA) has been recorded in low zones of the Patagonian steppes and Monte. Distribution data for *N. nevadoensis* and *N. setipennis* would indicate that both species avoid congeneric sympatry in high altitudes. These data would suggest an adaptation to these altitudinal zones

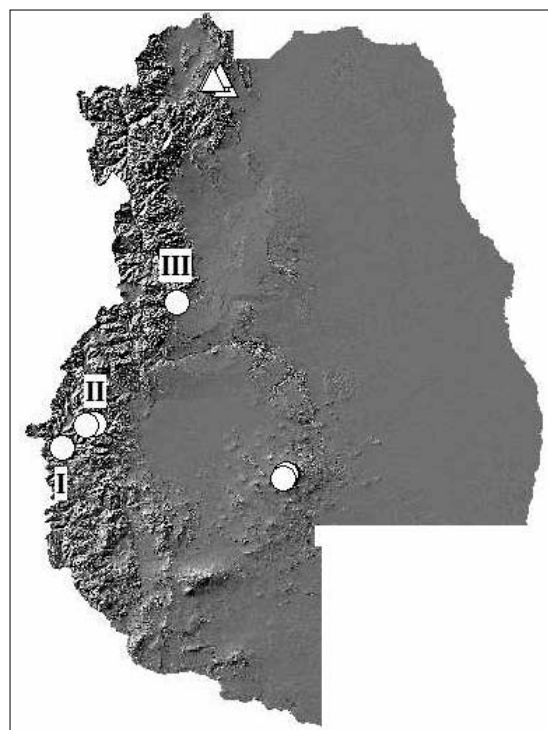
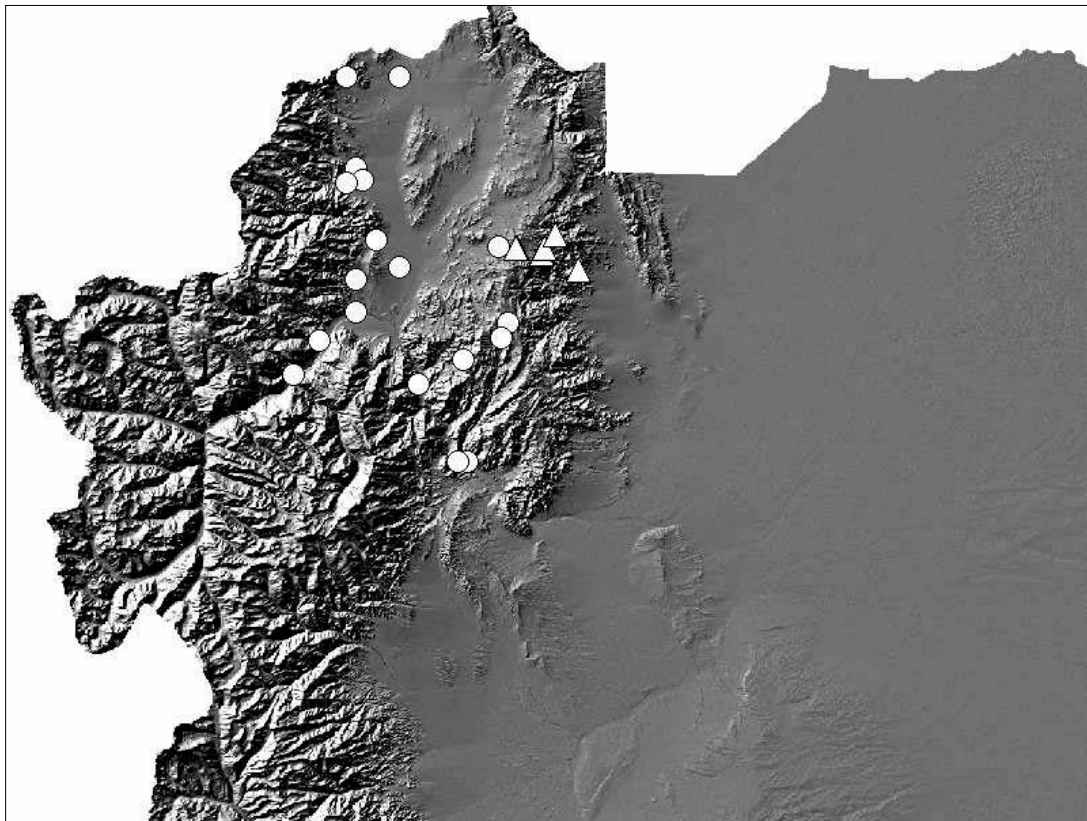
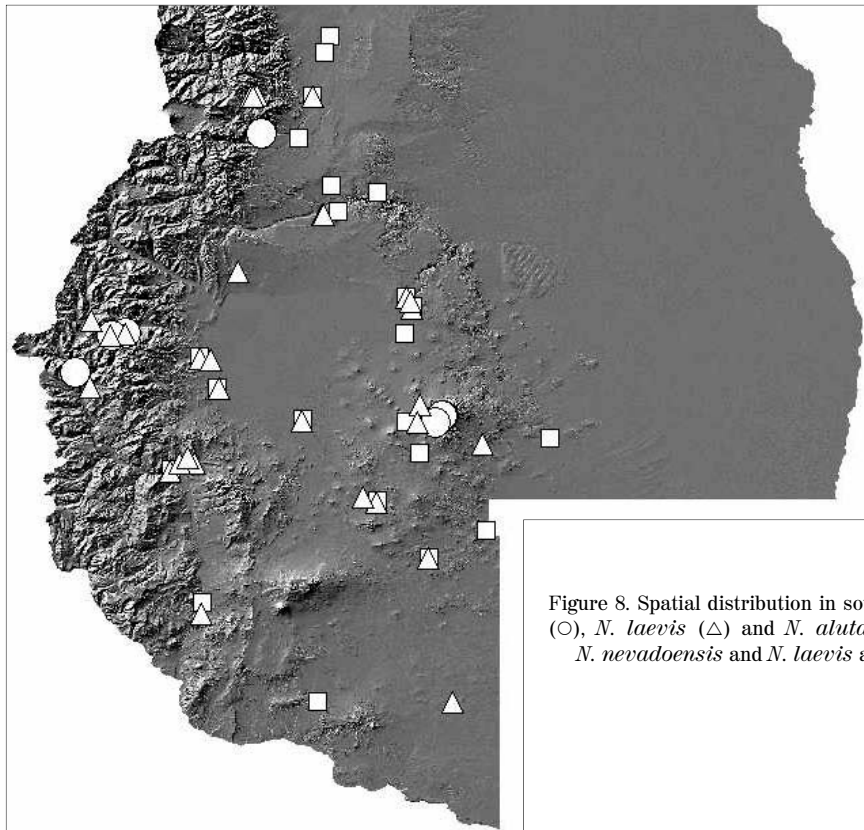


Figure 7. Geographical distribution of *Nyctelia nevadoensis* sp. nov. (○) and *N. setipennis* sp. nov. (△) in Mendoza province, Argentina.



not found in other species. As support, we found that in low altitudes *N. nevadoensis* exists in sympatry with another *Nyctelia* species because the conditions could be favourable for the coexistence with another congeneric species.

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APPENDIX

Specimens examined of *Nyctelia alutacea* Fairmaire, *N. laevis* Waterhouse and *N. plicatipennis* Lacordaire.

Nyctelia alutacea Fairmaire 1876. Lectotype (here designated): [S. Carlos] [*alutacea* n. sp./ det. Fairmaire (handwrite of Fairmaire)] [S. Carlos/ E. Steinheil] [Lectotypus/ *Nyctelia alutacea*/ Fairmaire 1876/ Des. G. Flores 2005] (MNHN). This specimen, place of collecting (San Carlos, Mendoza) and collector (E. Steinheil) coincide with the description of Fairmaire (1876).

Other material examined (all specimens housed at IADIZA). Argentina: Mendoza: Dto. San Carlos: San Carlos, IX-1978, F. Roig, 33°46'78"S, 69°03'00"W (1), Arroyo Papagayos, 09-XII-2004, G. Debandi, 1770 m, 33°16'12"S, 69°12'00"W (1), Arroyo El Yaucha, 21-I-1979, S. Roig, 1450 m, 35°01'48"S, 67°04'12"W (1), Puesto Las Gateadas, 12-X-1974, A. Roig, 34°04'01.2"S, 69°07'58.8"W (6); Dto. San Rafael: Cañón del Atuel, 22-I-1992, S. Roig, 35°01'48"S, 68°40'48"W (4), 03-II-1997, E. Albrecht, 35°01'48"S, 68°40'48"W (1), El Nihuil, I-1973, A. Roig, 35°01'48"S, 68°40'48"W (6), 01-III-1982, S. Claver, 35°01'48"S, 68°40'48"W (1), 19-III-1996, G. Flores, 35°01'48"S, 68°40'48"W (5), San Rafael, 06-III-2002, G. Flores (4), 20 km S Punta del Agua, 15-XII-1998, G. Flores-S. Roig, 35°42'36"S, 67°59'24"W (1), 10 km N Dique Agua del Toro, 07-III-2002, G. Flores, 34°30'00"S, 69°02'24"W (1), 4 km S Dique Agua del Toro, 07-III-2002, G. Flores, 34°37'12"S, 69°00'36"W (1), 20 km S Dique Agua del Toro, 18-XII-1998, G. Flores-S. Roig, 34°31'48"S, 68°49'12"W (1), 20 km S El Nihuil, 07-III-2002, G. Flores, 35°12'36"S, 68°41'24"W (4); Dto. Malargüe: Puesto La Senillosa, 20-I-1998, A. Atencio, 35°28'0.1"S, 69°34'59"W (1), Laguna Llananelo, 30-X-2001, G. Debandi, 35°37'12"S, 69°10'48"W (5), 66 km S El Nihuil, 06-I-2003, G. Flores, 35°37'48"S, 68°40'48"W (1), Reserva La Payunia, 06-I-2003, G. Flores-S. Roig, 36°00'36"S, 68°49'12"W (2), 80 km N límite con Neuquén, Route 40, 17-I-2003, G. Flores, 36°30'0"S, 69°39'36"W (1), W Sierra Chachauhén, 07-I-2003, S. Roig-G. Debandi, 36°30'00"S, 69°06'19"W (3), 80 km S El Nihuil, 06-I-2003, G. Flores, 35°46'48"S, 68°37'12"W (1), La Salinilla, 07-I-2003, G. Flores, 36°16'48"S, 68°34'12"W (2), Mina Ethel, 18-I-1974, A. Roig, 36°00'36"S, 68°49'12"W (10), El Mollar, 23-I-1979, S. Roig, 35°19'12"S, 69°40'12"W (1), Agua Escondida, XII-1975, S. Roig, 36°09'00"S, 68°18'00"W (1), Bardas Blancas, XII-1975, S. Roig, 35°51'36"S, 69°48'36"W (2).

Nyctelia laevis Waterhouse, 1841 (all specimens housed at IADIZA). Argentina: Mendoza: Dto. San Carlos: Real Las Lajas, 19-IX-2001, R. Bárcena, 2660 m, 34°04'03"S, 69°25'57"W (1), Refugio El Toscal, 18-XI-2001, R. Bárcena, 2464 m, 34°03'42.8"S, 69°23'57"W (1), Puesto Las Gateadas, 12-X-1974, A. Roig, 34°04'01.2"S, 69°07'58.8"W (13), Corral del Molle, 16-XI-2001, R. Bárcena, 2493 m, 34°03'57.9"S, 69°25'5.1"W (1); Dto. San Rafael: 1 km S El Nihuil, 29-IV-1995, G. Flores, 35°03'00"S, 68°39'36"W (1), Salar El Nihuil, 19-III-1996, G. Flores, 35°05'06"S, 68°39'18"W (5), 05-I-2003, G. Flores, 35°05'06"S, 68°37'19"W (1); Cañón del Atuel, 03-II-1997, E. Albrecht, 35°01'48"S, 68°40'48"W (1), Puesto El Morro, 31-I-1979, S. Roig, 1500 m, 35°44'15"S, 68°19'6.9"W (1), Cerro Los Buitres, 22-I-1979, S. Roig, 1650 m, 34°54'36"S, 69°29'24"W (1), Cerro Diamante, 06-I-2006, G. Debandi-R. Carrara, 2220 m, 34°37'58"S, 69°05'21.4"W (1), 06-I-2006, G. Debandi-R. Carrara, 2024 m, 34°38'05.6"S, 69°05'52.8"W (1); Dto. Malargüe: Mina Huemul, II-1978, S. Menu, 35°49'48"S, 69°42'00"W (2),

Bardas Blancas, XII-1975, S. Roig, 35°51'54"S, 69°48'54"W (1), Reserva La Payunia, 05-II-1983, F. Videla-S. Puig, 36°00'54"S, 68°49'30"W (1), 07-I-2003, G. Flores, 36°58'12"S, 68°27'36"W (1), El Mollar, 23-I-1979, S. Roig, 35°19'12"S, 69°40'12"W (2), Valle Noble, 19-III-1996, F. Videla, 1915 m, 35°27'36"S, 70°12'00"W (5), Mina Ethel, 12-I-1974, A. Roig, 36°00'54"S, 68°49'30"W (2), Reserva Caverna de las Brujas, 01-III-2003, L. Acosta, 1820 m, 35°48'00"S, 69°43'48"W (1), J. Gordillo, 1800 m, 35°48'00"S, 69°43'48"W (1), El Peralito, 24-II-1984, S. Puig-F. Videla, 35°59'24"S, 68°53'24"W (2), Las Leñas, 18-II-1999, C. Borgui, 35°12'17"S, 70°01'39.7"W (2), 17-II-1996, I. Peralta, 2700 m, 35°12'55"S, 70°05'38.4"W (1), Valle Hermoso, 17-II-1996, I. Peralta, 2700 m, 35°08'24"S, 70°11'24"W (1), 03-II-1997, E. Albrecht, 35°08'24"S, 70°11'24"W (1), La Salinilla, 07-I-2003, G. Flores, 36°16'48"S, 68°34'12"W (2), Río Cerro, 11-I-1993, G. Debandi, 35°49'48"S, 69°46'12"W (2), W Cerro Nevado, I-1976, A. Roig, 35°32'52"S, 68°36'53"W (2), 80 km N límite con Neuquén, Route 40, 17-I-2003, G. Flores, 36°30'00"S, 69°39'36"W (1), Puesto La Senillosa, 20-I-1998, A. Atencio, 35°28'0.1"S, 69°34'59"W (4), Laguna Llananelo, 30-X-2001, G. Debandi, 35°37'12"S, 69°10'48"W (4), W Cerro Mollar, 24-II-1994, S. Claver, 1823 m, 35°19'48"S, 69°37'12"W (1), Cerro Nevado, 08-I-2006, G. Debandi-C. Dominguez, 1823 m, 35°37'43"S, 68°37'43"W (7).

Nyctelia plicatipennis Lacordaire, 1830 (all specimens housed at IADIZA). Argentina: Mendoza: Dto. Las Heras: Quebrada Los Chacayes, I-1985, S. Roig, 32°33'06.8"S, 69°27'06.1"W (2), 01-XI-1998, S. Roig, 400 m, 32°33'06.8"S, 69°27'06.1"W (3), 16 km NW Tambillos, 05-II-2002, G. Flores, 2800 m, 32°07'48"S, 69°28'12"W (1), 50 km N Uspallata, 13-I-1999, G. Flores, 2250 m, 32°07'48"S, 69°21'36"W (2), Paramillos de Uspallata, 14-I-1999, G. Flores, 2900 m, 32°31'36"S, 69°21'38"W (1), 15 km N Uspallata, 28-XII-2000, C. Dominguez, 2230 m, 32°28'12"S, 69°24'36"W (1), 7 km NW Tambillos, 13-I-1999, G. Flores, 2500 m, 32°19'12"S, 69°27'00"W (1), Araucarias de Darwin, 14-I-1999, G. Flores, 2738 m, 32°29'03"S, 69°09'15.8"W (1), 27-XI-2003, G. Flores, 2730 m, 32°29'03"S, 69°09'15.8"W (2), 04-XII-2004, G. Flores, 2730 m, 32°29'03"S, 69°09'15.8"W (1), 25 km N Uspallata, 12-I-1999, S. Roig, 2400 m, 32°45'00"S, 69°34'48"W (1), 15-II-2006, G. Flores, 2395 m, 32°20'47"S, 69°26'12"W (1), Pampa de Canota, 28-XII-2005, S. Claver-F. Agrain, 2885 m, 32°40'26"S, 69°08'57.4"W (3), 15-II-2006, G. Flores-E. Ruiz Manzanos, 2975 m, 32°38'31"S, 69°08'08.88"W (4), Picheuta, 14-II-2002, G. Flores, 2200 m, 32°40'46"S, 69°31'35"W (1), 29-I-2004, G. Flores, 2200 m, 32°40'46"S, 69°31'35"W (3), 10 km W Uspallata, 15-II-2002, G. Flores, 32°37'12"S, 69°27'00"W (1); 20 km SE Uspallata, 20-IV-2001, S. Lagos, 32°46'12"S, 69°19'12"W (1), 23 km E Uspallata, 05-XII-2004, G. Flores, 2704 m, 32°43'06.9"S, 69°13'42"W (1), 3 km W Potrerillos, 01-IX-2001, G. Flores, 1400 m, 32°55'48"S, 69°13'12"W (3), 5 km W Potrerillos, 26-VIII-1998, G. Flores, 1400 m, 32°55'48"S, 69°14'24"W (1), 5 km W Tambillos, 27-XI-2003, G. Flores-S. Roig, 2500 m, 32°21'00"S, 69°28'12"W (2). San Juan: Dto. Calingasta: 12 km S Tocota, 17-V-1998, G. Flores, 31°47'24"S, 69°24'00"W (1), Parque Nacional El Leoncito, Pampa Jarillal, 25-XI-2003, G. Flores, 2850 m, 31°47'24"S, 69°24'00"W (2).