

### Zusammenfassung

Der Verfasser beschreibt 6 *Hispinae* aus verschiedenen Faunengebieten Südamerikas. Fünf davon wurden abgebildet. Drei Arten werden noch heute forschenden Wissenschaftlern gewidmet, eine Art trägt den Namen eines seinerzeit durch seine Sammeltätigkeit sehr geschätzten deutschen Botanikers.

### Summary

The author describes 6 *Hispinae* from different territories of South America. Five of them are figured. Three species are dedicated to scientists still working, one species is named after a German botanist at the time esteemed for his collecting.

### Резюме

Автор описывает 6 *Hispinae* из различных областей фауны Южной Америки. От пяти из них имеются изображения. Три вида посвящены и в настоящее время ученым-исследователям, один вид носит имя немецкого ботаника, которого за свою собирательную деятельность в свое время высоко почитали.

## New Bees of the Genera *Andrena* and *Nomada* from the Island Cyprus

(Hymenoptera: Apoidea)

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(With 4 figures)

The new bees described in this paper were collected by me from Cyprus and the types, allotypes and paratypes are found in my collection, while paratypes were placed in Deutsches Entomologisches Institut, Berlin, Germany.

*Andrena pareklisiae* n. sp.

(Figs 1—2)

Female. — Length 8.5 mm.

Black; clypeus dullish, with very fine longitudinal dense microsculpture, and somewhat fine punctures (denser and stronger at lower sides), with a dull, longitudinal, line-like convexity in middle of disk, apical margin shining; process of labrum polished and shining, base broader than apex; malar space present but very small; mandibles black, apex reddish brown; antennae black, joints 5 to 12 dark brown above and light brown beneath; third antennal joint longer than 4 + 5, but as long as 4 + 5 + 6; pilosity on head somewhat dense, pale, that on clypeus, supraclypeal plate, lower paraocular area white; clypeus with somewhat long, dense, pale white hairs not hiding the surface. Mesoscutum dull, minutely reticulated, with somewhat sparse, fine punctures; tegulae deep brown; wings subhyaline, apex

very slightly clouded; veins and pterostigma brown, costal vein black brown; basal vein originating considerably basad of the transverse median vein; pilosity on dorsum of thorax erect, somewhat long, light yellow, that on the propodeum similar, somewhat longer; propodeum dull, minutely reticulated, finely and granulate punctured, median triangle somewhat minutely reticulated, its very broad apical margin very finely irregularly striate, with a basal median, very fine longitudinal multinterrupted ridge reaching the middle and at each side basally, with some multinterrupted very fine ridges reaching the sides; legs black; anterior tarsi with basitarsi deep brown, last small joint light reddish brown; middle and hind tarsi, hind tibiae, light reddish brown; basitibial plate black brown; hind spurs pale yellow; floccus of hind trochanters pale white; femora with somewhat long pale hairs; hind tibiae with very pale golden white hairs, long and sparse on inner side, short and dense on outer side; hind basitarsi with somewhat sparse, very pale golden hairs on inner side. Abdomen minutely reticulated, with slightly raised sparse punctures, finer on tergites 3 to 5, dull; tergites 2 to 4 with the apical depressions broad and shallow, very slightly tinged with brown, the very narrow apical margins of tergites 1 to 5 brown; first tergite with erect, very pale golden white hairs; second tergite with erect, pale golden white, short hairs on disk, somewhat depressed white hairs on the apical margin forming a narrow, transverse, entire hair band; third and fourth tergites with erect, short, sparse black brown hairs on disk, apical margin with a broad, transverse, entire white hair band; fifth tergite with basal half having somewhat sparse, short black brown hairs, remainder with depressed, somewhat long, dense pale golden white hairs; sternites dull, minutely reticulated; apical margin of sternites 2 to 5 pale brown, with thin band of somewhat long, erect, pale golden white hairs; disk of sternites with shorter similar hairs.

Male. — Length 8.0 mm.

Similar to the female; clypeus pale lemon yellow, densely covered with long white hairs; remaining head somewhat densely covered with long pale golden white hairs; the hairs on cheeks whitish, denser, as long as those on clypeus. Pilosity on dorsum of thorax erect, somewhat long, not hiding the surface, pale golden white (in the newly emerged specimens) or very pale golden white (in somewhat older specimens); anterior tarsi with basitarsi black brown, small joints deep brown, last small joint reddish brown; middle and hind tarsi with basitarsi pale reddish brown, small joints nearly reddish brown; apex of hind tibiae pale reddish brown; legs with rather long pale golden white hairs. Abdominal tergites 1 to 5 with somewhat long, erect pale hairs not hiding the surface; sixth and seventh tergites covered with pale golden white hairs hiding the surface; sternites 2 to 5 with somewhat long, erect, pale hairs, denser on the pale brown apical margins.

*Lania*, 1 ♀ (type), 10 ♀♀ (paratypes), 11. iv. 1953; 1 ♂ (allotype), 2 ♀♀ (paratypes), 11. iii. 1953; 2 ♀♀ (paratypes), 26. ii. 1953; all the specimens

mentioned above were collected from *Sinapis alba* L. (*Cruciferae*). Yerasa, 8 ♂♂ (paratypes), 2. iii. 1945; 1 ♂ (paratype), 15. iii. 1945. Apsiou, 2 ♀♀ (paratypes), 2. iii. 1951; 1 ♀ (paratype), 10. iii. 1951. Pyrgos, 6 ♀♀, 1 ♂ (paratypes), 27. II. 1939. Trimiklini, 3 ♂♂ (paratypes), 29. iii. 1952. Pareklisia, 3 ♀♀, 2 ♂♂ (paratypes), 11. iii. 1938; all the specimens mentioned above were collected from *Alyssum campestre hirsutum* M. B. (*Cruciferae*). Lania, 1 ♀ (paratype), 11. iv. 1953, Yerasa, 1 ♂ (paratype), 2. iii. 1945, were placed in Deutsches Entomologisches Institut.

*Andrena pareklisiae* n. sp., is an oligotrophic bee belonging to the subgenus *Chlorandrena*, Pérez. It is related to *Andrena luridiloma* Strand (Arch. Naturg., 87, A, H. 3, p. 72, 1921), but these species differ in many details.

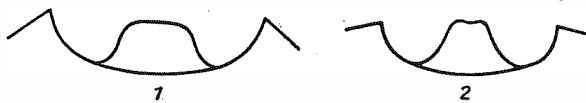


Fig. 1. Process of labrum of *Andrena luridiloma* Strand, ♀ (drawn by Dr. G. PETERSEN from the type). — Fig. 2. Process of labrum of *Andrena pareklisiae* n. sp., ♀

Through the kindness of Dr. HANS SACHTLEBEN, Director Deutsches Entomologisches Institut, Berlin, 1 ♀ of my Cyprian *Andrena luridiloma* n. sp., was compared by Dr. G. PETERSEN with the type ♀ of *Andrena luridiloma* Strand from Tsingtau. The results of that comparison are as follows: — *Andrena pareklisiae* n. sp., female. Mesoscutum and scutellum dull (in *Andrena luridiloma* Strand, dull); first and second tergites dull (in *Andrena luridiloma* Strand, shining); process of labrum different than in *Andrena luridiloma* Strand (figs. 1—2); clypeus with a dull longitudinal convexity in the middle of disk (in *Andrena luridiloma* Strand distinctly shining); antennae black brown, joints 5 to 12 dark brown above and light brown beneath (in *Andrena luridiloma* Strand antennae dark brown). *Andrena pareklisiae* n. sp., may be compared with *Andrena fertoni* Pérez (Espéc. Nouvell. Mellif. Barbarie, p. 49, 1895), but the latter is a different species closely related to *Andrena fulvago* Christ, having the mesoscutum shining (in *Andrena pareklisiae* n. sp., dull) and belonging to the subgenus *Chrysandrena*, Hedicke.

***Andrena panurgimorpha* n. sp.**

Female. — Length 8.5 mm.

Black; clypeus minutely reticulated, apical half somewhat densely punctured, shining, basal half dullish, with sparse, fine punctures, the narrow apical margin impunctate and brown; process of labrum broader than long, apical margin slightly concave in the middle; malar space very short; antennae black brown; third antennal joint longer than 4 + 5, somewhat shorter than 4 + 5 + 6; facial foveae dark brown; all head below antennae

with white hairs not hiding the surface of clypeus; cheeks with somewhat short hairs; vertex and occiput with somewhat sparse and very long, very pale greyish brown hairs. Mesoscutum very finely reticulated, with sparse, fine punctures, moderately shining; scutellum very finely reticulated, with sparse, fine punctures, shining, apical margin without the fine punctures; propodeum very finely reticulated, with sparse, fine and raised punctures, dull, median triangle minutely reticulated, shining, with a longitudinal fine ridge reaching middle of disk, at each side of the ridge with short, very fine, irregular, multinterrupted striae, not reaching the basal sides; tegulae deep brown, with light mark in the middle; basal vein originating a little mesad of transverse median vein; mesoscutum and scutellum with somewhat long and sparse, pale yellowish white hairs; propodeum with similar hairs not hiding the surface; legs dark brownish black; tibiae and tarsi deep brown; floccus of hind trochanters shining white; hind femora with dense and long, very pale white hairs on outer side; scopa of hind tibiae very dense and long, very pale white (in the non newly emerged specimens white); hind basitarsi with short, pale white hairs on outer side, dense, very pale yellowish white hairs on inner side. Abdomen moderately shining, very finely reticulated, first and second tergites with sparse, fine semiraised punctures; the very narrow apical margins of tergites 1 to 4 very pale brown; first tergite without distinct subapical depressions; second and third tergites with very weak subapical depression; tergites without distinct apical hair bands, with very sparse and short, thin white hairs mostly at sides; fourth tergite with sparse and thin apical hairs, very sparse in the middle; fifth tergite with dense golden white hairs, those at lower sides white; sternites shining; second sternite minutely coriaceous, basal area tinged with brown, apical half with somewhat strong and dense punctures, the narrow apical margin tinged with brown; third and fourth sternites with basal area slightly tinged with brown, subapical area somewhat strongly and sparsely punctured, the narrow apical margin pale yellow, disk with a very weak transverse depression in the middle (better seen from laterally), that of fourth weaker; disk of sternites with somewhat short, pale white hairs, those on apical margin similar, denser and longer.

Male. — Length 8.0 mm.

Similar to the female; lower half of clypeus with transverse lemon yellow stripe; antennae rather thick, black; third antennal joint longer than  $4 + 5$ , shorter than  $4 + 5 + 6$ ; third and fourth joints much broader than long, fifth joint broader than long, sixth joint as long as broad; all head below antennae with shining white hairs; clypeus with dense shining white hairs, longer on lower area; vertex and occiput with somewhat long, pale white hairs. Mesoscutum and scutellum with somewhat long, erect pale white hairs not covering the surface (in somewhat older specimens white); propodeum with somewhat long shining white hairs, denser at sides; mesopleura with somewhat long shining white hairs; legs black; tibiae and tarsi deep

brown, last small tarsal joint pale reddish brown; pilosity on legs shining white. Abdomen elongate ovate; apical margins of tergites 2 to 5 brown, that of first very narrowly brown; pilosity on abdomen thin, very sparse, somewhat longer at sides, not forming apical hair bands, shining white; sixth and seventh tergites with dense shining white hairs; apical margin of seventh tergite brown; apical margins of sternites 1 to 5 broadly brown, with somewhat long white hairs; eighth sternite peculiar, apical margin brown, rounded and emarginate in the middle.

Limassol, 1 ♀ (type), 1 ♂ (allotype), 1 ♀, 13 ♂♂ (paratypes). 16. iv. 1949; 5 ♀♀, 2 ♂♂ (paratypes), 21. iv. 1951; 2 ♀♀ (paratypes), 18. iv. 1951; 2 ♀♀, 3 ♂♂ (paratypes), 14. iv. 1953; 7 ♂♂ (paratypes), 15. iv. 1953; 3 ♀♀, 2 ♂♂, 19. iv. 1954; 6 ♀♀ (paratypes), 17. iv. 1954; 1 ♂ (paratype), 20. iv. 1954; 5 ♀♀, 4 ♂♂ (paratypes), 31. iii. 1956; 25 ♂♂ (paratypes), 1. iv. 1956; 1 ♀, 16 ♂♂ (paratypes), 9. iv. 1956; 4 ♀♀, 25 ♂♂ (paratypes), 14. iv. 1956; 5 ♀♀, 2 ♂♂ (paratypes), 18. iv. 1956. Polemedia Hills, 3 ♀♀, 9 ♂♂ (paratypes), 9. iv. 1939; 3 ♂♂ (paratypes), 2 iv. 1950. Limassol, 1 ♀, 1 ♂ (paratypes), 14. iv. 1956 were placed in Deutsches Entomologisches Institut.

*Andrena panurgimorpha* n. sp., belongs to the subgenus *Chlorandrena*, Pérez and comes near *Andrena stabiana* Morice described from Italy (Trans. Ent. Soc. London, 2, 245—246, pl. vii, fig. 8, 1899). These two species are very different in many details of colour of pilosity and structure. According to the original description *Andrena stabiana* Morice, ♀, has the hairs on face, vertex dark brown or partly black; scutellum with very fine punctures, hardly shining owing to an excessively regular and close reticulation of the entire surface. Hind tibiae and tarsi flavescent, thorax absolutely dull. In *Andrena panurgimorpha* n. sp., ♀ vertex and occiput with long, greyish very pale brown hairs; scutellum very finely reticulated, with sparse, fine punctures, shining, apical margin without fine punctures. Mesoscutum moderately shining; hind tibiae brownish black; hind tarsi deep brown. In *Andrena stabiana* n. sp., "process of eighth sternum emarginate at the apex (apex bilobed), lateral dilatations (spine-like lateral extensions) sinuated above and sharply edged at the apex; pilosity thin not hiding the out lines of the dorsum of the process and lateral dilatations; segment of eighth sternite just below the lateral dilatations twice as broad as in *Andrena senecionis* Pérez". In *Andrena panurgimorpha* n. sp., ♂, process of eighth sternite is emarginate at the apex, the lateral dilatations not emarginate above, well extended and rounded at the apex; pilosity dense, hiding the out lines of the dorsum of the process and the lateral dilatations; segment of eighth sternite just below lateral dilatations nearly one half as broad as in *Andrena senecionis* Pérez.

*Andrena panurgimorpha* n. sp., ♀, may be compared with *Andrena circinnata* Dours (Rev. Mag. Zool., 36, 275, 1873), but the latter is a very distinct species having golden reddish pilosity on the body, apical margin of tergites 2 to 4 with a band of short, depressed, ashy red hairs, interrupted

on second and third, hind scopa rusty, a little paler on inner side, posterior legs deep ferruginous.

*Nomada polemediana* n. sp.

(Figs 3—4)

*Nomada immaculata* Mavromoustakis, Ann. Mag. Nat. Hist., (12), 1, 561, 1948.

Female. — Length 7.5 mm.

Black; apical half of clypeus, labrum, mandibles, malar space, lower paraocular area along inner orbits nearly to level of insertion of antennae, all light reddish brown; antennae light reddish brown, scape darkened a little behind; clypeus shining, the black area somewhat sparsely punctured, remainder somewhat finely, rugosely punctured; labrum densely rugosely punctured, shining, broader than long, edentate, divided subapically in two distinct zones, the apical one narrower; third antennal joint longer than broad, a little longer than fourth; fourth and fifth antennal joints longer than broad; remaining joints as long as broad, last joint longer than broad (all better seen from below); tip of inner orbits with a short light reddish brown stripe; pilosity on head scanty, short, pale fulvous (paler in non newly emerged specimens), somewhat denser on occiput. Tegulae, tubercles, short linear entire stripe on pronotum, small transverse mark on postscutellum, light reddish brown; scutellum not convex, regular, with two large reddish brown marks at each side; wings subhyaline, apical margin and marginal cell infuscated; veins and pterostigma brown; costal vein black; seven hamuli on hind wings; propodeum somewhat strongly rugosely punctured, shining, median triangle with apical half transversely very finely striate (except the sides), basal half with a few irregular fine striae (missing from the anterior sides), middle longitudinally with very short, irregular, curved and narrow striae; mesoscutum and scutellum somewhat strongly, very densely and partly rugosely punctured, moderately shining, almost bare, with very sparse, short, pale fulvous hairs; pronotum and mesopleura with similar hairs denser on the latter; anterior legs light reddish brown, coxae black, except their light reddish brown apex beneath; middle legs light reddish brown, trochanters black beneath except their apex; hind legs light reddish brown, coxae and trochanters black beneath except their apex; apex of hind tibiae with three very short somewhat thick dark brown spines, equal, truncate at their apex; hind basitarsi linear, with a linear black stripe on outer side not reaching the base or the apex; anterior legs with very sparse or hardly visible pale hairs; hind femora and tibiae with extremely short, hardly visible, dense white pubescence at inner side. Abdomen shining, light reddish brown; first tergite nearly polished and unpunctured; tergites 1 to 3 somewhat minutely and sparsely punctured, subapical area and apical margin minutely coriaceous; base of first tergite with a black mark at each side nearly reaching the middle; basal sides of fourth tergite and base of fifth with an obscure stripe; sixth tergite light reddish brown, with base

broader than the oval apical margin; preapical fimbria dense, white; pilosity on abdominal tergites almost not visible, some only very short, sparse white hairs at sides; sternites light reddish brown.

Male. — Length 7.0 mm.

Similar to the female; lower paraocular area, mandibles, except their dark reddish brown apex, apical margin of clypeus, labrum entirely, yellowish reddish brown; scape yellowish reddish brown in front, black behind; remaining antennal joints light reddish brown; second, third or fourth antennal joints with a narrow dark mark behind; fourth antennal joint somewhat longer than broad, nearly as long as fifth; clypeus, supraclypeal plate, lower paraocular area covered with shining white hairs; front, vertex, occiput, with pale hairs not hiding the surface; cheeks with dense pale hairs. Tubercles, a mark at postscutellum in middle, yellowish; scutellum with small reddish brown mark at each side; mesoscutum and scutellum with somewhat long, pale fulvous hairs not hiding the surface; mesopleura with similar white hairs; anterior femora with a band of somewhat short white hairs beneath; hind femora

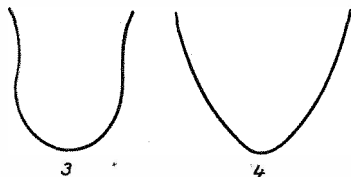


Fig. 3. Sixth tergite of *Nomada trispinosa* Schmdk., ♀. — Fig. 4. Sixth tergite of *Nomada polemediana* n. sp., ♀

with a flock of long dull whitish hairs at the base beneath; apex of hind tibiae with a row of short, thin white hairs. Fifth and sixth abdominal tergites with pale white hairs longer on fifth; seventh tergite with short, pale white hairs, long, narrow, nearly parallel sided, sinuated at the apex.

Limassol, 1 ♀ (type), 7 ♀♀ (paratypes), 17. iv. 1954; 1 ♂ (allotype), 1 ♀, 7 ♂♂ (paratypes), 15. iv. 1953; 10 ♀♀ (paratypes), 15. iv. 1951; 38 ♀♀ (paratypes), 16. iv. 1951; 18 ♀♀ (paratypes), 17. iv. 1951; 4 ♀♀ (paratypes), 15. iv. 1955; 6 ♀♀ (paratypes), 20. iv. 1955; 2 ♀♀, 1 ♂ (paratypes), 11. iv. 1953; 1 ♂ (paratypes), 14. iv. 1953; 1 ♂ (paratype), 13. iv. 1953; 1 ♀ (paratype), 14. iv. 1956; 1 ♂ (paratype), 14. iv. 1956; 1 ♀ (paratype), 24. iv. 1956; 2 ♀♀ (paratypes), 26. iv. 1956. Polemedia Hills 700 ft. 3 ♀♀ (paratypes), 9. iv. 1939. Akrounda, 1 ♂ (paratype), 23. iii. 1937. Limassol, 1 ♀ (paratype), 21. iv. 1951 and 1 ♂ (paratype), 15. iv. 1953, in Deutsches Entomologisches Institut.

In certain females (paratypes), base of third and fourth abdominal tergites (just beneath the apical margin of second and third tergites) blackened at each side the middle or fourth tergite with basal, transverse and narrow, black stripe, entire or interrupted, fifth tergite with basal, transverse and narrow, black stripe entire or interrupted; in certain males (paratypes) fourth tergite with basal, narrow blackened stripe.

*Nomada polemediana* n. sp., is parasite of *Andrena panurgimorpha* n. sp.; I have found a colony of *Andrena panurgimorpha* n. sp., at Limassol, in a hard uncultivated soil, and many females of *Nomada polemediana* n. sp.,

were entering continuously the ground burrows of the host or hovering a little above them.

*Nomada polemediana* n. sp., is related to *Nomada trispinosa* Schmdk., but these species differ in many details. *Nomada trispinosa* Schmdk., female. Labrum edentate and black, apical margin rounded, slightly up turned. Hind tibiae with three equal, very short, rather thick, black spines truncate at the apex, base of sixth tergite as broad as the rounded apical margin (fig. 3). Male. Clypeus and labrum entirely black; labrum as in the female; tegulae light yellow. *Nomada polemediana* n. sp., female. Labrum edentate, light reddish brown, broader than long, divided subapically in two zones, the apical zone shorter; hind tibiae with three equal, short, rather thick, brown spines, truncate at the apex; sixth tergite with base broader than the oval apical margin (fig. 4). Male. Apical margin of clypeus, labrum, yellowish brown; labrum as in the female; tegulae light reddish brown.

#### Summary

The author published in this paper the description of three new species of bees from the island Cyprus (Mediterranean East). These bees are *Andrena pareklisiae* n. sp., *Andrena panurgimorpha* n. sp., and *Nomada polemediana* n. sp. *Andrena pareklisiae* n. sp., and *Andrena panurgimorpha* n. sp., belong to the subgenus *Chlorandrena*, the former is related to *Andrena luridiloma* Strand, from Tsingtau and the latter to *Andrena stabiana* Morice from Italy. Of these new Cyprian bees *Andrena pareklisiae* n. sp., is oligotrophic visiting the flowers only of *Sinapis alba* L., and *Alyssum campestre hirsutum* M. B., *Cruciferae*, and *Andrena panurgimorpha* n. sp., is the host of the parasitic bee *Nomada polemediana* n. sp. Paratypes from all the new bees mentioned above were placed in Deutsches Entomologisches Institut, Berlin.

#### Zusammenfassung

Der Autor beschreibt in dieser Arbeit drei neue Bienenarten von Cypern: *Andrena pareklisiae* n. sp., *Andrena panurgimorpha* n. sp. und *Nomada polemediana* n. sp. *Andrena pareklisiae* n. sp. und *Andrena panurgimorpha* n. sp. gehören zur Untergattung *Chlorandrena*, wobei die erstgenannte mit *Andrena luridiloma* Strand aus Tsingtau, die letztere mit *Andrena stabiana* Morice aus Italien verwandt ist. Von diesen neuen cypriotischen Bienen ist *Andrena pareklisiae* n. sp. oligotroph und befliegt nur die Blüten von *Sinapis alba* L. und *Alyssum campestre hirsutum* M. B., *Cruciferae*. *Andrena panurgimorpha* n. sp. ist der Wirt der Schmarotzerbiene *Nomada polemediana* n. sp. Parotypen von allen genannten neuen Arten befinden sich im Deutschen Entomologischen Institut, Berlin.

#### Резюме

Автор описывает в своей работе три новых вида пчел с острова Кипра: *Andrena pareklisiae* n. sp., *Andrena panurgimorpha* n. sp., и *Nomada polemediana* n. sp. *Andrena pareklisiae* n. sp. и *Andrena panurgimorpha* n. sp. принадлежат к подроду *Chlorandrena*, причем первая однородна с *Andrena luridiloma* Strand из Циндао, а последняя — с *Andrena stabiana* Morice из Италии. Из этих новых кипрских пчел *Andrena pareklisiae* n. sp. — олиготрофна и облетает только цветы *Sinapis alba* L. и *Alyssum campestre hirsutum* M. B., *Cruciferae*. *Andrena panurgimorpha* n. sp. — хозяин и пчелы — паразита *Nomada polemediana* n. sp. Паратипы всех упомянутых новых видов находятся в Немецком Энтомологическом Институте в Берлине.

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Autor(en)/Author(s): Mavromoustakis G. A.

Artikel/Article: [New Bees of the Genera Andrena and Nomada from the Island Cyprus \(Hymenoptera: Apoidea\). 42-49](#)