

## Twenty-nine New Species in the Genus *Leatettix* (Acridoidea: Lentulidae) from the Southern, Western and Northern Cape, South Africa

DANIEL OTTE

*Academy of Natural Sciences of Drexel University, 1900 Benjamin Franklin Parkway, Philadelphia, Pennsylvania 19103 email: otte@ansp.org*

### ABSTRACT

*Leatettix* is a genus of small bush-dwelling grasshoppers known from the fynbos region of the Cape Province. They are distributed north through Namaqualand. One species is from near Aus, in Namibia. Four species in this genus were previously known, one as *Namatettix denticornis*. Twenty-nine new species are described here.

### INTRODUCTION

Four species of *Leatettix* Dirsh were known prior to this work. One of them had been placed under *Namatettix* Brown—a genus here synonymized under *Leatettix*. Twenty-nine new species are added to the genus in this study. I believe that a large number of species remain to be discovered. This is based on the observation that many of the species are known from a single locality. When viewed against the totality of the distribution, it is seen that there are large areas and many mountains in southern Africa where the genus has not been collected, and it virtually certain they are to be found there. Examination of the male genitalia and other characters shows that there are a number of species groups. Possibly when the genus is more thoroughly collected it will be necessary to break *Leatettix* up into a number of genera.

The members of this genus inhabit bushes—commonly they are found on fynbos through the southern and western areas. Only one species, *L. nama* seems to be found in true desert (the Namib Desert near Aus, Namibia).

These grasshoppers are best collected by beating bushes with collecting nets. Although I have not tried it I suspect that collecting them after

dark might be profitable as it is in many flightless grasshopper that live on bushes.

I owe it to the indefatigable collecting of H. Dick Brown that we know anything at all about this genus and other very small grasshoppers inhabiting the dry areas of South Africa and Namibia. He made special efforts to collect these small, difficult to find members of the Lentulidae. Few grasshopper collectors can match the superb collecting he did over a period of 30 years.

I have provided many illustrations to aid in the identification of *Leatettix* species. Construction of keys is not useful at this early stage in our knowledge of the group. Persons wishing to identify specimens should first look at the distribution maps to see whether their specimens are from near species that are already known. This will narrow down the choice of possible species. Thereafter a comparison of specimens to the figures provided may narrow the search down to a few or one species. Specimens of *Leatettix* collected from gaps in the known distribution of the genus are very likely to belong to new species.

All of the specimens studied in this work come from the South African National Collection of Insects, Biosystematic Division, ARC-Plant Protection Research Institute, Pretoria.

Genus *LEATETTIX* Dirsh 1956

*Leatettix* Dirsh, 1956. *Ent. Monthly Mag.* 92:115. Type species: *Leatettix laticornis* Dirsh, by monotypy.  
*Namatettix* Brown, 1970. *J. Nat. Hist.* 4:493. Type species: *Namatettix denticornis* Brown, H.D., by original designation. New Synonym.

## LIST OF SPECIES

- 1—*Leatettix laticornis* Dirsh > Figs 3, 4, 10, 12, 15
- 2—*Leatettix zetti* new species > Figs 3, 4, 10, 12, 15
- 3—*Leatettix tiono* new species > Figs 3, 4, 10, 12
- 4—*Leatettix ratoza* new species > Figs 2, 8, 10, 12, 15
- 5—*Leatettix tsaoba* new species > Figs 2, 4, 10, 12
- 6—*Leatettix nasuta* Brown, 1960 > Figs 3, 4, 10, 12, 16, 17
- 7—*Leatettix noteta* new species > Figs 3, 4, 10, 12, 17
- 8—*Leatettix timusa* new species > Figs 3, 5, 10, 12, 16, 17
- 9—*Leatettix zomana* new species > Figs 2, 5, 10, 12, 16, 17
- 10—*Leatettix vume* new species > Figs 2, 5, 10, 12, 18, 19
- 11—*Leatettix fala* new species > Figs 2, 5, 10, 12, 18, 19
- 12—*Leatettix monto* new species > Figs 2, 6, 10, 12, 18, 19
- 13—*Leatettix browni* new species > Figs 3, 5, 10, 12, 20, 21
- 14—*Leatettix moraki* new species > Figs 3, 6, 10, 12, 20, 21
- 15—*Leatettix smiti* (Dirsh, 1956) > Figs 3, 9, 10, 12, 20, 21
- 16—*Leatettix sulefa* new species > Figs 2, 6, 10, 12, 22, 23
- 17—*Leatettix wotafa* new species > Figs 2, 6, 10, 12, 22, 23
- 18—*Leatettix emole* new species > Figs 2, 6, 10, 12, 22, 23
- 19—*Leatettix emota* new species > Figs 2, 6, 10, 13, 24, 37
- 20—*Leatettix pota* new species > Figs 2, 9, 10, 13, 24, 37
- 21—*Leatettix sopika* new species > Figs 2, 8, 10, 13, 25, 37
- 22—*Leatettix ukami* new species > Figs 1, 10, 13, 26, 27
- 23—*Leatettix derula* new species > Figs 1, 6, 10, 13, 28, 29
- 24—*Leatettix tido* new species > Figs 1, 6, 10, 13, 28, 29
- 25—*Leatettix coti* new species > Figs 2, 10, 13, 28, 29
- 26—*Leatettix erymna* new species > Figs 2, 6, 10, 13, 30, 31, 32, 33
- 27—*Leatettix wiga* new species > Figs 2, 8, 11, 14, 35
- 28—*Leatettix denticornis* (Brown) > Figs 1, 6, 11, 13, 33
- 29—*Leatettix nama* new species > Figs 7, 11, 14, 34, 36
- 30—*Leatettix sipina* new species > Figs 2, 8, 14, 38, 39
- 31—*Leatettix limbi* new species > Figs 2, 8, 11, 14, 38, 39
- 32—*Leatettix selupa* new species > Figs 2, 9, 11, 14, 40, 41
- 33—*Leatettix selupina* new species > Figs 2, 9, 11, 14, 40, 41
- 34—*Uvarovidium peninsulare* (Dirsh, 1956) > Figs 2, 9, 14, 38,

1. *Leatettix laticornis* Dirsh, 1956

*Leatettix laticornis* Dirsh, 1956. *Ent. Monthly Mag.* 92:115. *Holotype male*, Southern Africa, Cape Province, between Aberdeen & Somerset East. Location of type: BMNH London NH Mus.

*Recognition*.— Figs 3, 4, 10, 12, 15. This species differs from all others principally by the configuration of the male aedeagus and epiphallus.

Face with three distinct carinae. Two frontal ridges joining into a single carina at level of antennae. Top of head with four low ridges between the eyes. Fastigium with almost parallel sides. Lateral foveolae distinct. Antennae slightly serrated. Fastigium slightly depressed above eyes in lateral view. Pronotum: Lateral lobes with many short ridges, and either unicolorous or with a pale middle band which divides at the front edge sending one arm to the back of the eyes and one arm to the base of the mandibles. Dorsum of pronotum with a median and two lateral ridges. The latter converging in the middle. Dorsum of abdomen with at least four longitudinal carinae. Subgenital plate large and triangular in lateral aspect. Cerci very small. Femur-3 with two broad dark crossbands.

*Male measurements (mm)*— NCI-412 BL 10.5, F3L 5.

*Specimens*.— (All SANC) *Holotype*: Cape Province, between Aberdeen & Somerset East. Example male, 26 miles NE of Uniondale, 14 ii 1958 (Brown) NCI-412.

2. *Leatettix zetti* new species

urn:lsid:zoobank.org:act:6A0CDCCD-2E68-4B01-870E-2C9E0017330D

*Type*.— *Holotype male*. NCI-413. Cape Province, 7 miles SE of Willowmore, 13 iii 1958 (HD Brown) (SANC).

*Recognition*.— Figs 3, 4, 10, 12, 15. This species differs from all others principally by the configuration of the male aedeagus and epiphallus. Face with three distinct carinae. Two frontal ridges joining into a single carina at level of antennae. Top of head more or less smooth, without distinct ridges. Fastigium with nearly parallel ridges. Pronotum: lateral lobes with a pale central band which continues onto the head as a bright band behind the eyes and a pale band extending to the base of the mandible. Dorsum of pronotum with five rows of discontinuous ridges. Rear margin of pronotum incurved. Dorsum of abdomen with four rows of longitudinal ridges. Femur-3 with two dark crossbands. Subgenital plate large and distinctly triangular in lateral view.

*Male measurements (mm)*,— NCI-413 BL 11.5, F3L 5.

*Specimens*.— (All SANC) Holotype male, 7 miles SE of Willowmore, 13 iii 1958 (HD Brown) NCI-413.

**3. *Leatettix tiono*** new species

urn:lsid:zoobank.org:act:2ACB8E88-D6BD-4973-99B6-AC6AE9963C27

*Type*.— Holotype male. NCI-392. Cape Province, Hellskloof Pass, Paradysberg, 14 ix 1968 (HD Brown) (SANC).

*Recognition*.— Figs 3, 4, 10, 12, 15. This species differs from all others principally by the configuration of the male aedeagus and epiphallus. Antennae very short and serrated. Face and top of fastigium caved inward, in lateral aspect. Fastigium narrow, with parallel sides. Top of head with bumpy ridges along interior margin of eyes. Dorsum of pronotum with three parallel ridges, the outer ones discontinuous on meta notum. Pronotum distinctly saddle-shaped. Lateral lobes with a pale area in the anterior central part. Rear margin of pronotum incurved. Side of head with a small pale area behind the eye. Dorsum of abdomen with three rows of carinae. Subgenital plate large and quadrangular in lateral view. Femur-3 with two dark crossbands.

*Male measurements (mm)*.— NCI-392, Male BL 11, F3L 5.

*Specimens*.— (All SANC). Holotype male, Hellskloof Pass, Paradysberg, 14 ix 1968 (HD Brown) NCI-392— Paratype male, same data, NCI-393.

**4. *Leatettix ratoza*** new species

urn:lsid:zoobank.org:act:82741D4E-4FF6-46D9-85BA-48604EB16ECA

*Type*.— Holotype male. NCI-289. Cape Province, 25 miles SW of Sutherland, Roggeveld, 20 ix 1966 (HD Brown) (SANC).

*Recognition*.— Figs 2, 8, 10, 12, 15. This species differs from all others principally by the configuration of the male aedeagus and epiphallus. Frontal ridge wider, but forming a single ridge between the eyes. Body surface not covered in distinct ridges, more smooth. Without a distinct pale band on the lateral lobes. Back of eye with a small pale patch. Fastigium with parallel sides.

Rear margin of pronotum flat, not incurved. Dorsum abdomen without ridges. Subgenital place red. Cerci small but distinct. Femur-3 slightly banded, very wide.

*Male measurements (mm)*.— NCI-289, male BL 11, F3L 5.

*Specimens*.— (All SANC). Holotype male, 25 miles SW of Sutherland, Roggeveld, 20 ix 1966 (HD Brown) NCI-289. Example female, 25 miles SE of Sutherland, 20 ix 1966, NCI-270.

**5. *Leatettix tsaoba*** new species

urn:lsid:zoobank.org:act:C5C6D9B8-FDA3-40F2-8B0E-5355BC42664A

*Type*.— Holotype male. bi129. Cape Province; Vredendal 8 km NW of Vredendal 13 Sept 1967 (HD Brown) (SANC).

*Recognition*.— Figs 2, 4, 10, 12. This species differs from all others principally by the configuration of the male aedeagus and epiphallus. Face with six ridges below level of antennae. Fastigium narrow with nearly parallel sides. Dorsum of head with three parallel longitudinal ridges. Dorsum of pronotum with three parallel ridges, color pale along lateral ridges. Lateral lobes with a pale band through the middle section. This does not extend noticeably onto the head. Subgenital plate tall and quadrangular in lateral aspect. Top of abdomen without noticeable ridges.

*Male measurements (mm)*.— BL 10; F3L 6.

*Specimens*.— (All SANC). bi129— South Africa, Cape Province; Vredendal 8 km NW of Vredendal 13 Sept 1967 (HD Brown) (SANC).

**6. *Leatettix nasuta*** Brown, 1960

*Leatettix nasuta* Brown. 1960. Jour. ent. Soc. Sthn. Africa 23(1):128. *Holotype male*, Southern Africa, Cape Province, Sundays River Valley, 12 miles S. Kirkwood. Location of type: TMSA Pretoria Transv.

*Recognition*.— Figs 3, 4, 10, 12, 16, 17. This species differs from all others principally by the configuration of the male aedeagus and epiphallus. Frontal ridge composed of a single ridge above the level of the antennae, bifurcating into two ridges below the antennae, then narrowing again below

the median ocellus and diverging again below the median ocellus. Top of head: Fastigium with parallel sides. Occiput with low longitudinal ridges. Dorsum of pronotum with three parallel ridges, the lateral one converging in the middle section. Posterior margin emarginate. Lateral lobe with a large triangular pale area; this continues onto the head, behind the eye and to the lower cheeks. Abdomen without ridges. Femur-3 without strong crossbands.

*Male measurements (mm).*—BL 9, F3L 5.5.

*Specimens.*—(All SANC). Cape Province, Sundays River Valley, 12 miles S. Kirkwood—Example male, same data, NCI-420. Example female, NCI-419 — Example male, Albertinia, 10 ix 1960 (HD Brown) NCI-410 — NCI-418, Cape Province, Albertinia, 20 Sept 1960 (HD Brown).

**7. *Leatettix noteta* new species**

urn:lsid:zoobank.org:act:77B55499-BBFB-477D-A595-E6B7337DA5A9

*Type.*— Holotype male. NCI-235. Cape Province, Outeniqua Mountains, Prince Alfreds Pass, 15 ii 1958 (HD Brown) (SANC).

*Recognition.*— Figs 3, 4, 10, 12, 17. This species differs from all others principally by the configuration of the male aedeagus and epiphallus. Body very slender. Lateral lobes of pronotum with a triangular pale area in which the dorsal arm extends onto the head behind the eyes and the ventral arm extends onto the lower cheeks. Dorsum of pronotum with three ridges; the lateral two are discontinuous and are pale in color. The pale pronotal bands extend backwards onto the meso and metanotum and onto the dorsum of the abdomen. Subgenital plate quadrangular in shape in lateral aspect. Femur-3 with dark crossbands or without.

*Male measurements (mm).*—NCI-235 BL 13, F3L 7; NCI 246 BL 15, F3L 7.5.

*Specimens.*—(All SANC). Holotype male, Outeniqua Mountains, Prince Alfreds Pass, 15 ii 1958 (HD Brown) NCI-235 — Paratype male, Noetzie, Knysna, 8 ii 1958 (Brown) NCI 246.

**8. *Leatettix timusa* new species**

urn:lsid:zoobank.org:act:CF2B24D4-FFCC-4E9F-8DBF-6A3978C224AB

*Type.*— Holotype male. NCI-415. Cape Province, Wilderness, 20 x 1964 (AL Capener) (SANC).

*Recognition.*— Figs 3, 5, 10, 12, 16, 17. This species differs from all others principally by the configuration of the male aedeagus and epiphallus. Very similar to *L. timusa*. Frontal ridge with nearly parallel carinae. Top of head: fastigium with nearly parallel sides; occiput with irregular small ridges. Top of pronotum with three rows of carinae. The lateral one discontinuous in central section. Posterior margin of pronotum emarginate. Top of body with very low ridges extending onto abdomen. Subgenital plate quadrangular in lateral view. Femur-3 with two darker crossbands.

*Male measurements (mm).*—BL 14, F3L 7.

*Female measurements (mm).*— BL 22, F3L 10.

*Specimens.*—(All SANC). Holotype male, Wilderness, 20 x 1964 (AL Capener) NCI-415 — Paratype female, same data, NCI-416.

**9. *Leatettix zomana* new species**

urn:lsid:zoobank.org:act:320D305B-ED92-4112-AF76-A03CE227E170

*Type.*— Holotype male. NCI-252. Cape Province, Van Rhyns Pass, 6 miles W of Nieuwoudtsville, 21 ix 1961 (Brown and Furst) (SANC).

*Recognition.*— Figs 2, 5, 10, 12, 16, 17. This species differs from all others principally by the configuration of the male aedeagus and epiphallus. Frontal ridge forming a single carina above the level of the antennae, forming two parallel carinae from just above the bases of the antennae down to the clypeus. Top of head: fastigium slightly wider in front. Occiput with four low ridges. Dorsum of pronotum without ridges and posterior margin only slightly emarginate; lateral lobes with a slightly triangulate pale area in the middle, wider in front, extending to back of eye and to the lower cheeks. Subgenital plate slightly quadrangular, pointed at upper apex. Femur-3 with two strong dark crossbands. Tibia-3 red.

*Male measurements (mm).*—NCI-252 BL 13, F3L 7.2; NCI-254 BL 12, F3L 7

*Female Measurements (mm).*— BL 18.5, F3L 9; NCI-253 BL 13, F3L 7.

*Specimens.*—(All SANC). Holotype male, Van Rhyns Pass, 6 miles W of Nieuwoudtville, 21 ix 1961 (Brown and Furst) NCI-252 — Paratype male, same data, NCI-254 — Paratype male, same data, NCI-253.

**10. *Leatettix vume* new species**

urn:lsid:zoobank.org:act:6555AFD8-B725-4144-BBD2-E568B9B5F516

*Type.*— Holotype male. NCI-281. Cape Province, 8 miles S of Calvinia, 21 ix 1961 (Brown and Furst) (SANC).

*Recognition.*— Figs 2, 5, 10, 12, 18, 19. This species differs from all others principally by the configuration of the male aedeagus and epiphallus. Body of males green, females brown with black bands. Body smooth, not covered with many ridges. Frontal ridge dividing into two carinae at level of antennae. Top of head: fastigium narrow with wide lateral ridges. Occiput with four low ridges. Top of pronotum virtually without ridges. Lateral lobes unbanded. Back of head with a black band behind the eyes, this bordered by upper and lower ivory bands. Femur-3 with three dark bands only on upper marginal area. Female lateral lobe with a dark upper band and a pale lower band. Subgenital plate oval in latera aspect.

*Male measurements (mm).*—NCI-281 BL 11, F3L 6; NCI-282 BL 12, F3L 6.5.

*Specimens.*—(All SANC). Holotype male, 8 miles S of Calvinia, 21 ix 1961 (Brown and Furst) NCI-281 — Paratype male, same data, NCI-282.

Paratype male, female, 8 miles E of Nieuwoudtville, 21 ix 1961 (Brown and Furst). NCI-283 — Example female, 8 km N of Nieuwoudtville, 28 ix 1972 (Brown, Koster and Prinsloo) NCI-279.

**11. *Leatettix fala* new species**

urn:lsid:zoobank.org:act:27CBAAA3-D6B5-4980-A6AD-26F50081122E

*Type.*— Holotype male. NCI-276. Cape Province, 8 miles E of Nieuwoudtville, 21 ix 1961 (HD Brown) (SANC).

*Recognition.*— Figs 2, 5, 10, 12, 18, 19. This species differs from all others principally by the configuration of the male aedeagus and epiphallus. Body color of male green. Body generally smooth. Frontal ridge consisting of a single carinae down to below antenna and then bifurcating into two closely spaced, thick carinae. Top of head: fastigium narrow, with parallel thick carinae. Occiput without prominent ridges. Top of pronotum with low lateral carinae and a higher median carina. Posterior margin emarginate. Subgenital plate somewhat quadrangular in lateral aspect. Femur-3 very broad, lower margin with small teeth; upper marginal area with two dark bands.

*Male measurements (mm).*—NCI-276 BL 12, F3L 6.

*Specimens.*— (All SANC). Holotype male, 8 miles E of Nieuwoudtville, 21 ix 1961 (Brown) NCI-276 — Paratype male, same data, NCI-277

**12. *Leatettix monto* new species**

urn:lsid:zoobank.org:act:4D54BF2C-1D77-49E4-9C92-51CE46B7618B

*Type.*— Holotype male. NCI-250. Cape Province, 6 miles N of Citrusdal, 1 ix 1961 (Brown and Furst) (SANC).

*Recognition.*— Figs 2, 6, 10, 12, 18, 19. This species differs from all others principally by the configuration of the male aedeagus and epiphallus. Body color greenish in life. Body surface with low undulations and no prominent ridges. Frontal costa with two parallel ridges descending well below antennae, then uniting for a short span into a single ridge, then separating into two carinae just above clypeus. Top of head: fastigium wide, with parallel sides. Occiput with low irregular ridges. Top of pronotum with three ill-defined lines of ridges. Posterior margin slightly emarginate. Subgenital plate rounded in lateral aspect. Femur-3 without distinct crossbands.

*Male measurements (mm).*—NCI-250 BL 11, F3L 6.

*Specimens.*— (All SANC). Holotype male, 6 miles N of Citrusdal, 1 ix 1961 (Brown and Furst) NCI-250.

13. *Leatettix browni* new species  
urn:lsid:zoobank.org:act:3C994030-CB00-497D-9B88-3F9CB7C9C9D2

*Type.*— Holotype male, B3-33. South Africa, Cape Province, Sundays R.V. Kirkwood. 20:11:1958 (H.Dick Brown)(Labelled as Paratype male)(in The Natural History Museum, London).

*Recognition.*— Figs 3, 5, 10, 12, 20, 21. This species differs from all others principally by the configuration of the male aedeagus and epiphallus. Frontal ridge diverging at the lower level of the antennal sockets. Face with four complete vertical carinae and two incomplete ones. Top of head: fastigium with nearly parallel sides vertex with four tubercles and raised central area. Top of pronotum with five lines of ridges. Posterior margin emarginate. Lateral lobes with a triangular pale area with extensions to back of eye and to lower cheeks. Cheeks with prominent carinae. Abdomen with three rows of ridges running entire length. Subgenital plate almost quadrangular in lateral aspect. Femur-3 with two broad dark crossbands.

*Specimens.*— Holotype male, B3-33. South Africa, Cape Province, Sundays R.V. Kirkwood. 20:11:1958 (H.Dick Brown)(Labelled as Paratype male)(in The Natural History Museum, London).

14. *Leatettix moraki* new species  
urn:lsid:zoobank.org:act:8BF31265-10C1-43A4-90C4-8CBB84865EC3

*Type.*— Holotype male. NCI-319. Cape Province, Swartberg Pass (N), 11 xii 1961 (Brown, Furst, Prinsloo) (SANC).

*Recognition.*— Figs 3, 6, 10, 12, 20, 21. This species differs from all others principally by the configuration of the male aedeagus and epiphallus. Body color greenish. Legs and antennae reddish. Frontal ridge forming a single ridge above bottom of antennal sockets, diverging into two carinae

below that. Top of head: Fastigium as wide as long, with parallel sides. Occiput with low mounds. Top of pronotum with three rows of longitudinal ridges. Lateral lobe with a narrow horizontal pale line in middle; this extends to the back of the eye. Abdomen without dorsal ridges. Subgenital plate rounded in lateral view and very small. Femur-3 with two indistinct crossbands; knees reddish. Tibia-3 red.

*Male measurements (mm).*—NCI-319 BL 14.5, F3L 6.5.

*Specimens.*— (All SANC). Holotype male, Swartberg Pass (N), 11 xii 1961 (Brown, Furst, Prinsloo) NCI-319 — Paratype males (2), same data, NCI-320, NCI-321.

#### 15. *Leatettix smiti* (Dirsh, 1956) New Combination

*Uvarovidium smiti* Dirsh. 1956. Jour. ent. Soc. Sthn. Africa 19:282. Holotype male, Southern Africa, Cape Province, Swartberg Mts., between Oudtshoorn & Albert. Location of type: BMNH London NH Mus.

*Recognition.*— Figs 3, 9, 10, 12, 20, 21. This species differs from all others principally by the configuration of the male aedeagus and epiphallus. Body contrastingly marked with reddish, ivory and black coloration. Top of head: fastigium about as long as wide. Occiput with two very low ridges. Top of pronotum with a central carina and two lateral carinae: the latter discontinuous in the central section. Lateral lobes with a triangular ivory mark in the middle, bordered by black bands above and below this. Ivory band extends to back of eye and to lower cheeks. Dorsum of abdomen with three low ridges, reddish in basal half. Subgenital plate small. Femur-3 strongly banded with black and ivory.

*Specimens.*— (All SANC). Holotype. Southern Africa, Cape Province, Swartberg Mts., between Oudtshoorn & Albert. Location of type: BMNH London NH Mus.

**16. *Leatettix sulefa* new species**

urn:lsid:zoobank.org:act:1A0E775B-B784-4AE2-A17E-366C5ABEFDDC

*Type*.— Holotype male. NCI-306. Cape Province, 11 km SW Sutherland, 25 ix 1972 (Brown, Koster, Prinsloo) (SANC).

*Recognition*.— Figs 2, 6, 10, 12, 22, 23. This species differs from all others principally by the configuration of the male aedeagus and epiphallus. Body mostly smooth. Frontal costa divided into two ridges from about the top of the antennal sockets. Top of head: fastigium longer than wide. Occiput with very low ridges. Top of pronotum with a distinct median ridge and two indistinct lateral ridges. Lateral lobe with a middle ivory band and dark bands above and below that. Middle band extends to back of eye. Abdomen pale brown on top; black along sides. Subgenital plate bending strongly upwards and forwards. Femur-3 with two broad dark cross bands. Tibia-3 reddish brown.

*Male measurements (mm)*.— NCI-306 BL 10, F3L 5;

*Female measurements (mm)*.— BL 15, F3L 6.5

*Specimens*.— (All SANC). Holotype male, 11 km SW Sutherland, 25 ix 1972 (Brown, Koster, Prinsloo) NCI-306 — Paratype males (2), paratype female, same data. NCI-307 (female), NCI-308, NCI-309 (males).

**17. *Leatettix wotafa* new species**

urn:lsid:zoobank.org:act:A3B8224A-E10D-4805-848A-A801F8A9AD5A

*Type*.— Holotype male. NCI-311. Cape Province, 10 miles W of Albertinia, 9 ix 1960 (Brown) (SANC).

*Recognition*.— Figs 2, 6, 10, 12, 22, 23. This species differs from all others principally by the configuration of the male aedeagus and epiphallus. Frontal ridge dividing at upper level of antennae. Top of head: fastigium about as long as wide; occiput with a broad longitudinal platform. Top of pronotum with three ridges, the lateral one discontinuous and overlapping in central section.

Lateral lobes with a broad upper band; a triangular middle band and a dark lower band. The middle band extends to the back of the eyes and to the lower cheeks. Top of body reddish brown; the lateral body is mostly black. Subgenital plate is small, and triangular in lateral view. Femur-3 with two dark cross bands. Tibia-3 pinkish.

*Male measurements (mm)*.— NCI-311 BL 12, F3L 6.

*Specimens*.— (All SANC). Holotype male, 10 miles W of Albertinia, 9 ix 1960 (Brown). NCI-311 — Paratype males (2), same data, NCI-312, NCI-313.

**18. *Leatettix emole* new species**

urn:lsid:zoobank.org:act:9D6BEA5E-B029-4779-A026-D12187A328F1

*Type*.— Holotype male. NCI-397. Cape Province, 16 km SE Middelpoos, 25 ix 1972 (Brown, Koster and Prinsloo) (SANC).

*Recognition*.— Figs 2, 6, 10, 12, 22, 23. This species differs from all others principally by the configuration of the male aedeagus and epiphallus. Body surface fairly smooth. Frontal costa forming a single ridge for a short distance above the level of the antennal sockets. Top of head: Fastigium about as long as wide, with nearly parallel sides. Occiput with low ridges. Top of pronotum with a median carina and two lateral carinae, the latter are interrupted in the middle section. Lateral lobes with an ivory central band, dark above and below this band. Side of body with dark patches on each segment. Subgenital plate oval in lateral aspect. Femur-3 with two broad dark crossbands.

*Male measurements (mm)*.— NCI-397 BL 9, F3L 5.5.

*Specimens*.— (All SANC). Holotype male, 16 km SE Middelpoos, 25 ix 1972 (Brown, Koster and Prinsloo). NCI-397.

**19. *Leatettix emota*** new species

urn:lsid:zoobank.org:act:FC22BFDC-138C-4625-A3E9-DEE375E79645

*Type*.— Holotype male. NCI-251. Cape Province, 12 miles S of Clanwilliam, 1 ix 1961 (DS Hardy) (SANC).

*Recognition*.— Figs 2, 6, 10, 13, 24, 37. This species differs from all others principally by the configuration of the male aedeagus and epiphallus. Frontal ridge forming a single ridge above the antennal sockets. Top of head: Fastigium longer than wide, with nearly parallel sides. Occiput with three low ridges, as continuation of the fastigial ridges. Top of pronotum with five ridges—a higher median ridge, two discontinuous lateral ridges and two low ridges between median and lateral ridges. Lateral lobes with a central triangular pale area which extends onto the head, behind the eye and to the base of the mandible. Side of body blackish. Subgenital plate curving upwards and forwards. Femur-3 without crossbands on side.

*Male measurements (mm)*.—NCI-251 BL 14, F3L 6; NCI-262 BL 12, F3L 6.2.

*Specimens*.— (All SANC). Holotype male, 12 miles S of Clanwilliam, 1 ix 1961 (DS Hardy) NCI-251 — Paratype male, 20 miles S of Clanwilliam, 1 x 1967 (Brown) NCI-262.

**20. *Leatettix pota*** new species

urn:lsid:zoobank.org:act:BE313922-8FFF-44C1-A39C-5DF7C5677984

*Type*.— Holotype male. NCI-421. Cape Province. Gannaga Pass, 27 km S of Middelpos, 26 ix 1972 (Brown, Koster and Prinsloo) (SANC).

*Recognition*.— Figs 2, 9, 10, 13, 24, 37. This species differs from all others principally by the configuration of the male aedeagus and epiphallus. Body surface fairly smooth. Frontal ridge forming a single carinae very briefly above the level of the antennae. Top of head: Fastigium oval in shape, with broadly rounded lateral carinae. Occiput with low rounded ridges. Top of pronotum with a sharp median ridges and low rounded lateral ridges. Lateral lobes of pronotum with a central ivory band; dark below and above this band. Side of meso and metanotum mostly blackish. Side of abdomen

with black pathes in first five segments. Femur-3 with two broad dark crossbands.

*Male measurements (mm)*.—NCI-421 BL 11, F3L 5.5.

*Specimens*.— (All SANC). Holotype male, Gannaga Pass, 27 km S of Middelpos, 26 ix 1972 (Brown, Koster and Prinsloo) NCI-421

**21. *Leatettix sopika*** new species

urn:lsid:zoobank.org:act:3BD3857F-4434-4CD7-8414-95034E18F736

*Type*.— Holotype male. NCI-428. Cape Province. 2 km east of Lamberts Bay, 12 ix 1967 (HD Brown) (SANC).

*Recognition*.— Figs 2, 8, 10, 13, 25, 37. This species differs from all others principally by the configuration of the male aedeagus and epiphallus. Body generally smooth. A colorful species: mostly dark but with red protruding from the back of the pronotum, a red subgenital plate, with yellow on the occiput, and behind the eyes, and with orange hind femora.

*Male measurements (mm)*.—NCI-428 BL 12.5, F3L 6.7; NCI-258 BL 12, F3L 7; NCI-430 BL 12, F3L 7.

*Specimens*.— (All SANC). Holotype male. 2 km east of Lamberts Bay, 12 ix 1967 (HD Brown) NCI-428 — Paratype males (5), Oudepost, 15 NNW of Malmesbury, 9 ix 1967 (HD Brown) NCI 385, NCI-381, NCI-382, NCI-383, NCI-384 — Paratype male, Clanwilliam area, Pakhuis Pass, 1 x 1967 (HD Brown) NCI-258 — Paratype male, 2 miles E of Lamberts Bay, 12 ix 1967 (HD Brown) NCI-430 — Example males (3) female, 14 miles SW of Het Kruis, 11 ix 1967 (HD Brown) NCI-243, NCI-261, NCI-263, NCI-288b, NCI-291, NCI -292.

**22. *Leatettix ukami*** new species

urn:lsid:zoobank.org:act:D4383297-ED61-4F9D-BC84-AD891B850499

*Type*.— Holotype male. NCI-240. 3 miles S of Kamieskroon, 4 ix 1961 (Brown and Furst) (SANC).

*Recognition*.— Figs 1, 10, 13, 26, 27. This species differs from all others principally by the configuration of the male aedeagus and epiphallus.

*Male measurements (mm).*—NCI-240 BL 11, F3L 6—NCI-239 BL 12, F3L 6.5 — bi135 BL 11; F3L 6.5.

*Specimens.*— (All SANC). Holotype male, 3 miles S of Kamieskroon, 4 ix 1961 (Brown and Furst) NCI-240 — Paratype males, 8 km S of Nababeep, 7 x 1972 (Brown, Koster, Prinsloo). NCI-398, NCI-399, NCI-400 (female) — Paratypes 3 males, 1 mile S of Nuwerus, Van Rhynsdorp District, 14 ix 1967 (Brown) NCI-401, NCI-402, NCI-403 — Paratype male, same place, 26 ix 1968 (Brown) NCI-389b — Example male, 3 miles E of Kamieskroon, 4 ix 1961 (Brown and Furst) NCI-239 — Example males (3), 7 miles NE of Steinkopf, 17 ix 1961 (Brown and Furst) NCI-294, NCI-295, NCI 298 — Example females (2), same data, NCI-296, NCI-297 — Example male, 8 miles S of Calvinia, 21 ix 1961, NCI-280 — bi 135—South Africa, Cape Province; Buffels River 11 mi SW of Springbok 18 Sep 1961, Brown and Furst.

**23. *Leatettix derula*** new species

urn:lsid:zoobank.org:act:B9C5FEBF-C4BB-41B0-ABFE-0D79AC8B706A

*Type.*— Holotype male, 11 miles SE Leliesfontein, Kamiesberge, 8 ix 1968 (Brown) NCI-407.

*Recognition.*— Figs 1, 6, 10, 13, 28, 29. This species differs from all others principally by the configuration of the male aedeagus and epiphallus. Frontal ridge forming a single from the bottom of the antennal sockets. Fastigium narrow, longer than wide, with broad lateral ridges. Top of abdomen: With three ridges. Lateral lobes with a broader middle ivory. Top of abdomen without ridges. Femur-3 with two dark crossbands.

*Male measurements (mm).*— NCI-407 BL 9, F3L 5.5; NCI-408 BL 9.5, F3L 5.5.

*Specimens.*— Holotype male, 11 miles SE Leliesfontein, Kamiesberge, 8 ix 1968 (Brown) NCI-407 — Paratype male, 13 miles SE of Kamieskroon, 9 ix 1968 (HD Brown) NCI-408.

**24. *Leatettix tido*** new species

urn:lsid:zoobank.org:act:C7AC8724-D6C7-4307-AE70-CC356969E365

*Type.*— Holotype male. NCI-452. Cape Province, 1 mile south of S Nuwerus, 14 September 1967 (HD Brown) (SANC) (SANC).

*Recognition.*— Figs 1, 6, 10, 13, 28, 29. This species differs from all others principally by the configuration of the male aedeagus and epiphallus. Frontal ridge forming a narrow carinae above the middle of the antennal sockets. Top of head: Fastigium as wide as long. Occiput with longitudinal and lateral ridges. Top of pronotum with five rows of broken longitudinal ridges. Lateral lobe with a triangular ivory section, which extends forward onto the head. Top of abdomen with five rows of longitudinal ridges. Femur-3 with a row of small ridges along the lower margin.

*Male measurements (mm).*—

*Specimens.*— (All SANC). NCI-452 : Cape Province, 1 mile south of S Nuwerus, 14 September 1967 (HD Brown) (SANC).

**25. *Leatettix coti*** new species

urn:lsid:zoobank.org:act:59F21CAF-E55E-4D3C-9EED-62CFDECC3D72

*Type.*— Holotype male. NCI-454. Cape Province, 3 miles east of Wolfhok/ Kamiesberg, 8 September 1968 (HD Brown) (SANC).

*Recognition.*— Figs 2, 10, 13, 28, 29. This species differs from all others principally by the configuration of the male aedeagus and epiphallus. Frontal ridge forming a single ridge to below the antennal sockets. Top of head: fastigium longer than wide; with parallel sides. Top of pronotum with 5 rows on longitudinal ridges. Lateral lobes with a broad triangular ivory band which extends onto the head. Top of abdomen with 5 sets of longitudinal ridges. Femur-3 unique! With large spines along the ventral margin.

*Specimens.*— (All SANC). NCI-454: Cape Province, 3 miles east of Wolfhok/ Kamiesberg, 8 September 1968 (HD Brown) (SANC).

**26. *Leatettix erymna* new species**

urn:lsid:zoobank.org:act:77D8D73E-D69F-4006-B9A6-D075DA1BD88A

*Type*.— Holotype male. NCI-255. Cape Province, 5 miles W of Clanwilliam, 2 ix 1961 (Brown and Furst) (SANC).

*Recognition*.— Figs 2, 6, 10, 13, 30, 31, 32, 33. This species differs from all others principally by the configuration of the male aedeagus and epiphallus. Frontal ridge forming a single ridge throughout its length. Top of head: Fastigium with parallel sides. Occiput with low longitudinal ridges. Top of pronotum with three distinct longitudinal ridges. Lateral lobes with a broad central ivory band; darker below and above. Abdomen without dorsal ridges. Subgenital plate short. Femur-3 with two large dark crossbands.

*Male measurements (mm)*.— NCI-255 BL 9.5, F3L 5; NCI-441 BL 8, F3L 4.5; NCI-305 BL 11, F3L 5.

*Specimens*.— (All SANC). Holotype male, 5 miles W of Clanwilliam, 2 ix 1961 (Brown and Furst) NCI-255 — Paratype male, 14 miles SW of Het Kruis, 11 ix 1967 (HD Brown) NCI-441 — Paratype female nymph, same data (NCI-442) — Paratype males (4), same data, NCI-443, NCI-444, NCI-445, NCI-446 — Paratype males (4), 6 miles N of Citrusdal, 1 ix 1961 (Brown and Furst) NCI-299, NCI-306, NCI-301, NCI-305 — Paratype males (2), Oude Post, 15 miles NNW Malsmesbury, 9 ix 1967, NCI-304, NCI-305b — Example male, Pakhuis Pass, Clanwilliam District, 1 x 1967 (HD Brown) NCI-256.

**27. *Leatettix wiga* new species**

urn:lsid:zoobank.org:act:2C9F2AA6-391D-423E-BB25-59172322B84A

*Type*.— Holotype male. NCI-314. Cape Province, Theronberg Pass, 22 km ENE Ceres, 24 ix 1972 (Brown, Koster, Prinsloo) (SANC).

*Recognition*.— Figs 2, 8, 11, 14, 35. This species differs from all others principally by the configuration of the male aedeagus and epiphallus. Frontal ridge forming a short single ridge above the antennal sockets. Top of head: fastigium narrow

with broad lateral ridges. Occiput with four low longitudinal ridges. Top of pronotum with a distinct median ridge and low, ill-defined lateral ridges. Lateral lobe dark above and below, with a triangular middle ivory band which extends to the back of the eye and to the base of the mandible. Meso and metanotum and basal abdominal segments reddish on top, with black sides. Subgenital plate very short. Femur-3 with two dark cross bands. Tibiae reddish.

*Male measurements (mm)*.— NCI-314 BL 12, F3L 7; NCI-328 BL 14, F3L 7.5.

*Specimens*.— (All SANC). Holotype male, Theronberg Pass, 22 km ENE Ceres, 24 ix 1972 (Brown, Koster, Prinsloo) NCI-314 — Paratype female, same data, NCI-329 — Paratype males (2), same data, NCI-330, NCI-330b — Paratype males (4), 24 km NW Sutherland, 25 ix 1972 (Brown, Koster, Prinsloo) NCI-315, NCI-317, NCI-327, NCI-328 — Paratype female, same data, NCI-318 — Paratype males (2), 6 km SW of Sutherland, 25 ix 1972 (Brown, Koster, Prinsloo) NCI-316 — Paratype males (2), Rietvlei, 48 miles SE of Laingsburg, 8 xii 1961 (Brown, Furst, and Pick) NCI-323, NCI-324 — Paratype female, same data, NCI-326.

**28. *Leatettix denticornis* (Brown) New Comb.**

*Namatettix denticornis* Brown, H.D. 1970. J. Nat. Hist. 4:494. Holotype male: Type locality: Africa, Southern Africa, Cape Province, Namaqualand, 3 m, S. Kamieskroon. Location of type: SANC Pretoria.

*Recognition*.— Figs 1, 6, 11, 13, 33. This species differs from all others principally by the configuration of the male aedeagus and epiphallus.

*Male measurements (mm)*.— NCI-449 BL 12, F3L 6.5. NCI-447 BL --, F3L 6.5.

*Specimens*.— (All SANC). Holotype male: Type locality: Africa, Southern Africa, Cape Province, Namaqualand, 3 m, S. Kamieskroon — Paratype male, 11 miles SE of Springbok, 17 ix 1967 (HD Brown) NCI-449 — Paratype male, 7 miles E of Kamieskroon, 16 ix 1967 (HD Brown).

**29. *Leatettix nama*** new species

urn:lsid:zoobank.org:act:8FD61026-1DD6-4EC1-826D-12E5101C05DA

*Type*.— Holotype male. bi186. Namibia; 2 mi W of Aus 15 May 1959 (HD Brown) (SANC).

*Recognition*.— Figs 7, 11, 14, 34, 36. This species differs from all others principally by the configuration of the male aedeagus and epiphallus. Antennae: yellowish, three times as long as eyes. Head: frons extending well beyond front of eyes; frontal ridge very narrow; fastigium; occiput with low ridges, with lateral bands; eyes not very large, about as high as distance between bottom of eyes to mandibles; cheeks with a dark band behind the eyes. Pronotum: disk with lateral yellowish bands, median cut by three sulci; lateral lobes banded with a wide dorsal band, a narrow middle band and a narrow lower band. Legs-1 and -2 brownish, unbanded. Legs-3: femur strongly banded with ivory and dark brown; knees dark in upper third; tibiae red; tarsus yellowish or pink. Abdomen: with a low median ridge, pale brown on dorsum, dark brown on sides. Cerci small, pointed.

*Male measurements (mm)*.— Males: BL 15; F3L 8.5-9.

*Female measurements (mm)*.— Females: BL 20; F3L 9.

*Specimens*.— (All SANC). bi 185, bi 186, bi 187—Namibia; 2 mi W of Aus 15 May 1959, Brown

**30. *Leatettix sipina*** new species

urn:lsid:zoobank.org:act:2C6311D1-437F-447B-86FA-FF3CDAD529DB

*Type*.— Holotype male, NCI-259. Cape Province, 5 miles W of Clanwilliam, 2 ix 1961 (Brown and Furst) (SANC).

*Recognition*.— Figs 2, 8, 14, 38, 39. This species differs from all others principally by the configuration of the male aedeagus and epiphallus. Body brightly colored with green, yellow, orange and red. Frontal ridge forming a single ridge above the level of the antennal sockets. Antennae orange. Fastigium slightly longer than wide. With parallel sides. Occiput without ridges with a brownish median band and yellow lateral bands.

Top of pronotum: median ridge distinct; lateral ridges rounded off. Lateral lobes with a narrow triangular ivory band in anterior half; this band extends as a bright yellow band to the back of the eye. Metanotum with a red band bordering the pronotum. Abdomen without ridges, greenish in color. Subgenital plate rounded. Dark in color. Femur-3 with two broad dark crossbands. Tibia-3 somewhat orange.

*Male measurements (mm)*.— NCI-259 BL 11, F3L 6; NCI-257 BL 16.5, F3L 7.5; NCI-431 BL --, F3L 7

*Specimens*.— (All SANC). Holotype male, 5 miles W of Clanwilliam, 2 ix 1961 (Brown and Furst) NCI-259 — Paratype female, same data, NCI-257.

Paratype male, 7 miles S Vredendal, 13 ix 1967 (Brown) NCI-431 — Paratype female, same data, NCI-429.

**31. *Leatettix limbi*** new species

urn:lsid:zoobank.org:act:9755D569-9AB8-44BA-87D5-D067128E40A0

*Type*.— Holotype male, NCI-427. Cape Province, 7 miles S of Vredendal, 13 ix 1967 (HD Brown) (SANC).

*Recognition*.— Figs 2, 8, 11, 14, 38, 39. This species differs from all others principally by the configuration of the male aedeagus and epiphallus. Very similar in coloration to *L. sipina*.

*Male measurements (mm)*.— NCI-427 BL 12, F3L 6.

*Specimens*.— (All SANC). Holotype male, 7 miles S of Vredendal, 13 ix 1967 (Brown) NCI-427.

**32. *Leatettix selupa*** new species

urn:lsid:zoobank.org:act:CEE493FC-8CB8-4154-B2F6-6ACA8756B2E2

*Type*.— Holotype male. NCI-310. Gannaga Pass, 27 km S of Middelpoos, 26 ix 1972 (Brown, Koster, Prinsloo) (SANC).

*Recognition*.— Figs 2, 9, 11, 14, 40, 41. This species differs from all others principally by the configuration of the male aedeagus and epiphallus. Body generally smooth, without distinct ridges. Frontal ridge wide above the level of the antennal

sockets. Body color in pinned specimens yellow-brown in pinned specimens, possibly iridescent green in life. Lateral lobes without dark markings. Abdomen without ridges. Subgenital plates very short, somewhat triangular in lateral aspect. Femur-3 greenish, without dark crossbands. Tibia-3 slightly orange.

*Male measurements (mm).*— NCI-310 BL 12, F3L 5.5.

*Specimens.*— (All SANC). Holotype male, Gannaga Pass, 27 km S of Middelpos, 26 ix 1972 (Brown, Koster, Prinsloo) NCI-310 — Paratype male, same data, NCI-422 — Paratype female, same data, NCI-423. — Example males (2), same data, NCI-274 — Example males (2), 24 km NW of Sutherland (Brown, Koster and Prinsloo) NCI-284 — Example female, same data, NCI-286 — Example males (3), 25 miles SW of Sutherland, Roggeveld, NCI-269, NCI-277, NCI-290 — Example male, Kleinvis River, Sutherland District, 30 viii 1969 (Brown) NCI-273.

**33. *Leatettix selupina*** new species

urn:lsid:zoobank.org:act:FC5578B1-43D3-426C-8824-C6DE2372CDF0

*Type.*— Holotype male, NCI-287. Sutherland, 17 ix 1963 (JA Vermeulen) (SANC).

*Recognition.*— Figs 2, 9, 11, 14, 40, 41. This species differs from all others principally by the configuration of the male aedeagus and epiphallus. Body generally quite smooth; without distinct ridges. Body color in pinned specimens greenish, possibly iridescent green in life. Frontal ridge forming a single ridge very briefly above the level of the antennal sockets. Pronotum with a low median ridge; lateral ridges barely indicated. Lateral lobes without dark markings. Abdomen without ridges. Subgenital plates very short, somewhat triangular in lateral aspect. Femur-3 greenish, without dark crossbands. Tibia-3 slightly orange.

*Male measurements (mm).*— NCI-287 BL 12.5, F3L F3L 6.

*Specimens.*— (All SANC). Holotype male, Sutherland, 17 ix 1963 (JA Vermeulen) NCI-287 — Paratype male, same data, NCI-288 — Paratype male, 24 km NW of Sutherland (Brown, Koster and Prinsloo) NCI-285.

***UVAROVIDIUM*** Dirsh, 1956, Dirsh.

*Uvarovidium*, 1956. Ent. Monthly Mag. 92:278.

Type species: *Uvarovidium peninsulare* Dirsh.  
New synonym.

**34. *Uvarovidium peninsulare*** (Dirsh, 1956)

*Uvarovidium peninsulare* Dirsh. 1956. Jour. ent. Soc. Sthn. Africa 19:28. Holotype male, Southern Africa, Cape Province, Cape Peninsula. Location of type: BMNH London NH Mus.

*Recognition.*— Figs 2, 9, 14, 38, 41. This species differs from all others principally by the configuration of the male aedeagus and epiphallus.

*Specimens.*— Holotype male, Southern Africa, Cape Province, Cape Peninsula

REFERENCES

- Brown, H. D. 1960. New grasshoppers (Acridoidea) from the Great Karroo and Southeastern Cape Province. J. Entomol. Soc. S. Afr. 23: 126-143.
- Brown, H. D. 1970. New genera and species of Acridoidea (Orthoptera) from South Africa. J. Nat. Hist. 4: 493-509.
- Dirsh, V. M. 1956. A new species of the genus *Acrotylus* Fieber 1853 (Orthoptera: Acrididae) from South Africa. Entomologist's Mon. Mag. 92 115-116.
- Dirsh, V. M. 1956. Some new and little known South African Acridoidea (Orthoptera). J. Entomol. Soc. S. Afr. 19: 250-288.

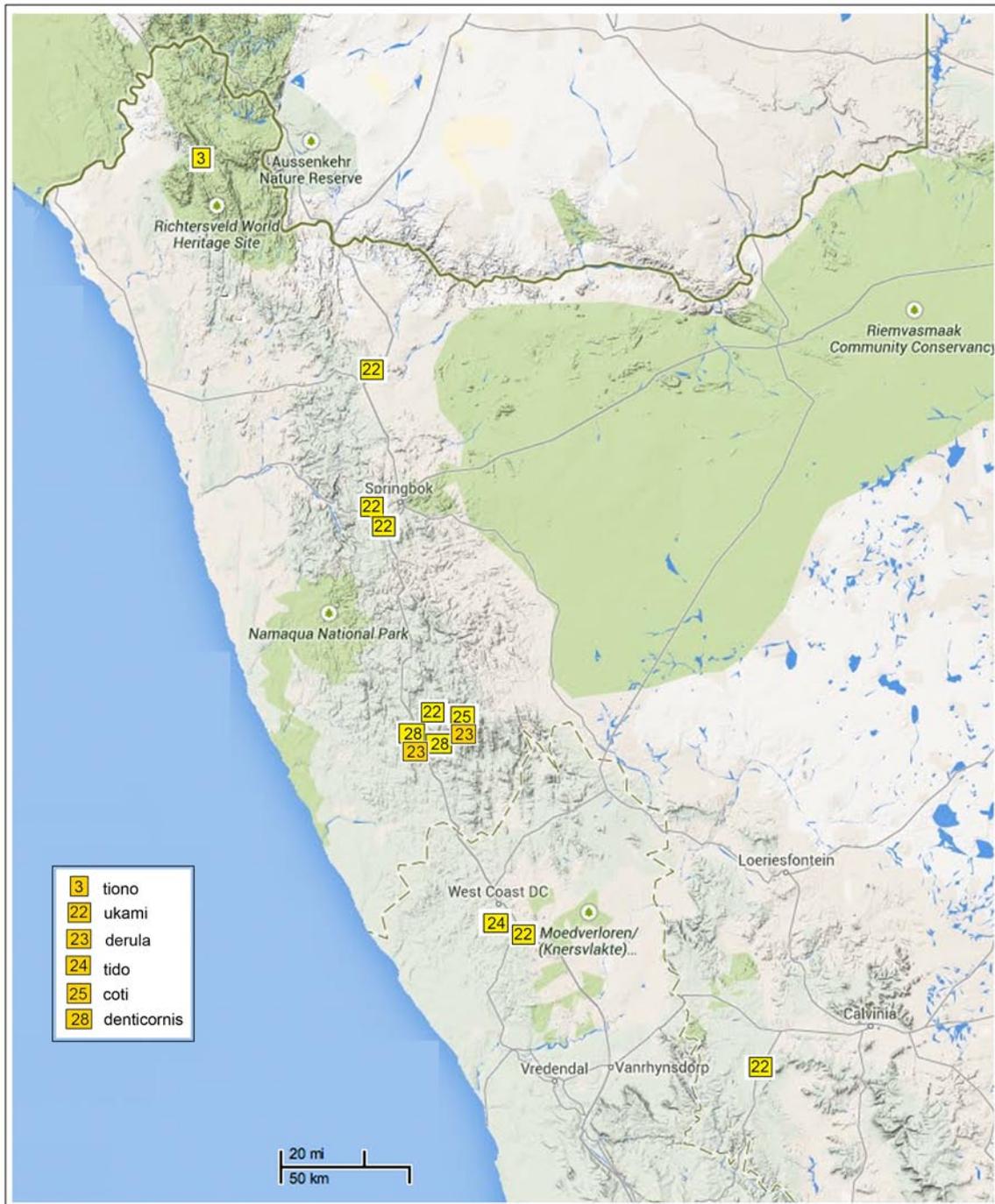


Fig. 1. Distribution the northwestern species of *Leatettix*. *L. nama* is from Aus, Namibia. It is not shown.

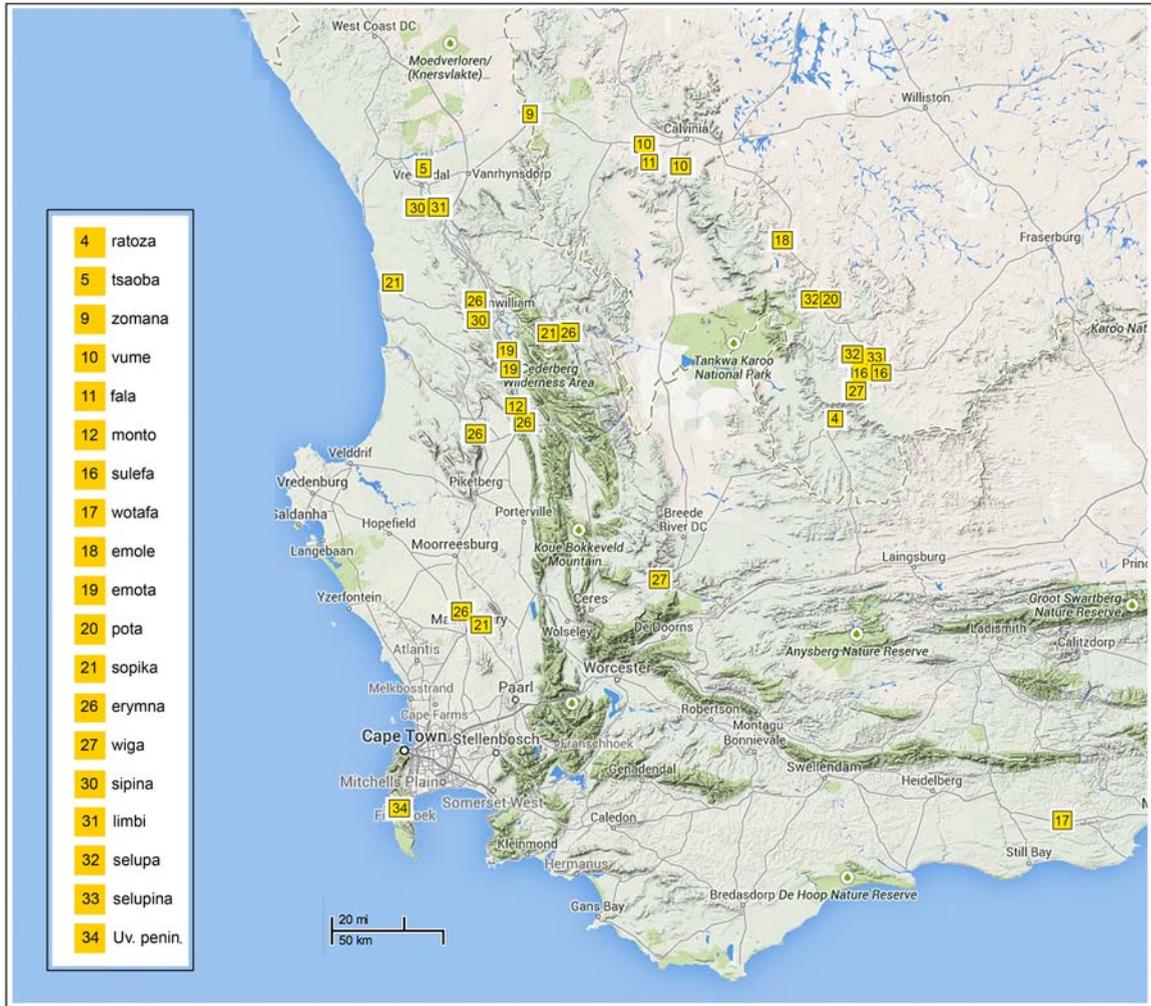


Fig. 2. Distribution the southwestern species of *Leatetix*.

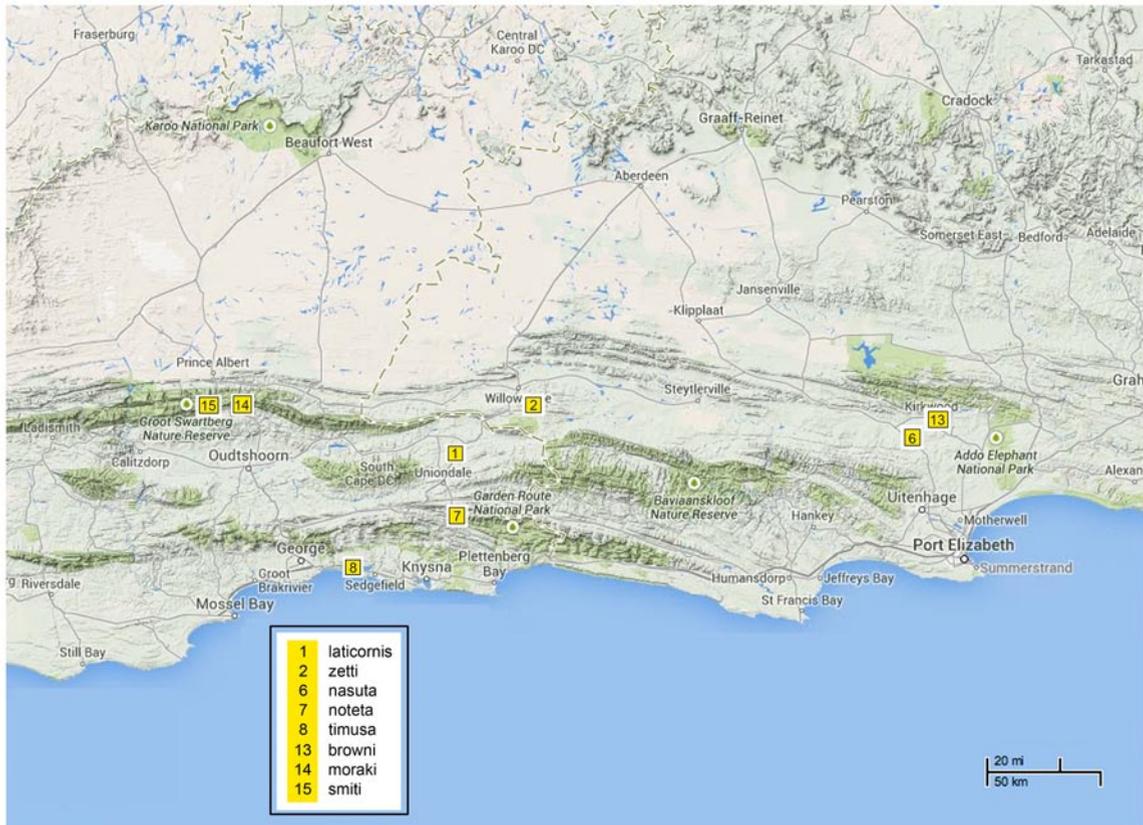


Fig. 3. Distribution the southern species of *Leatettix*.

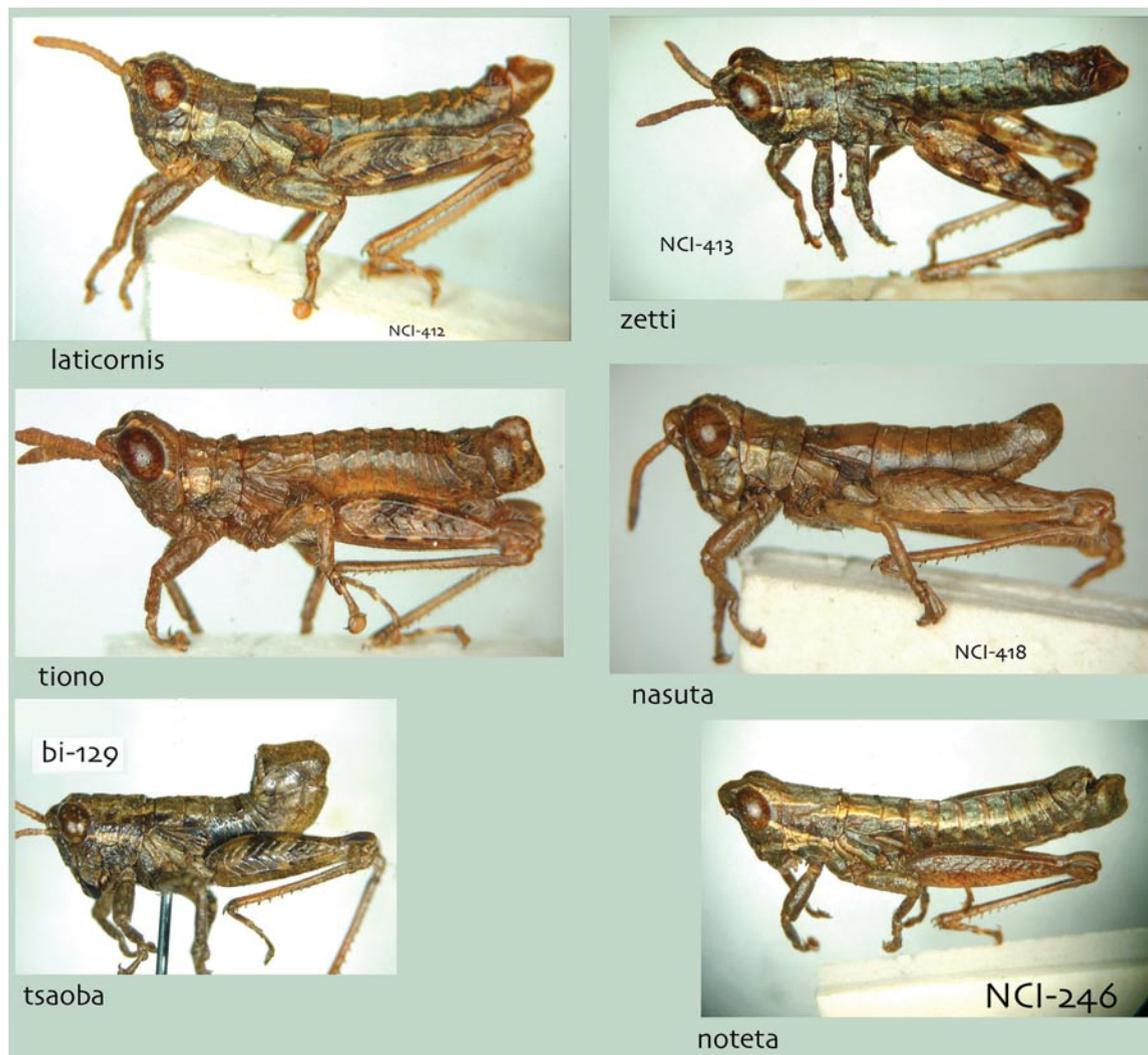


Fig. 4. Portraits of six species of *Leatettix*. The code number are the specimen serial numbers. For measurements see Recognition.

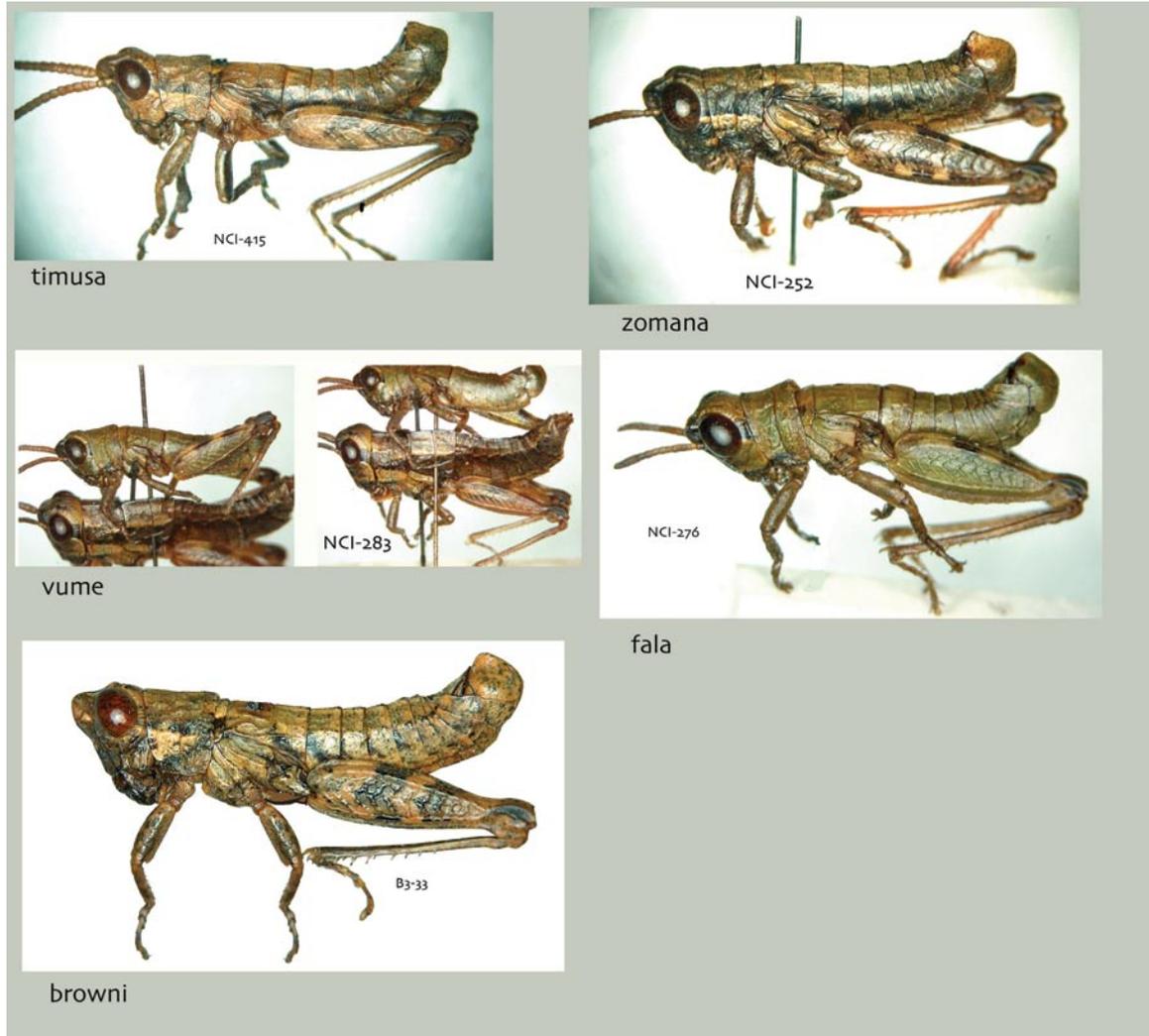


Fig. 5. Portraits of five species of *Leatettix*. The code number are the specimen serial numbers. For measurements see Recognition.

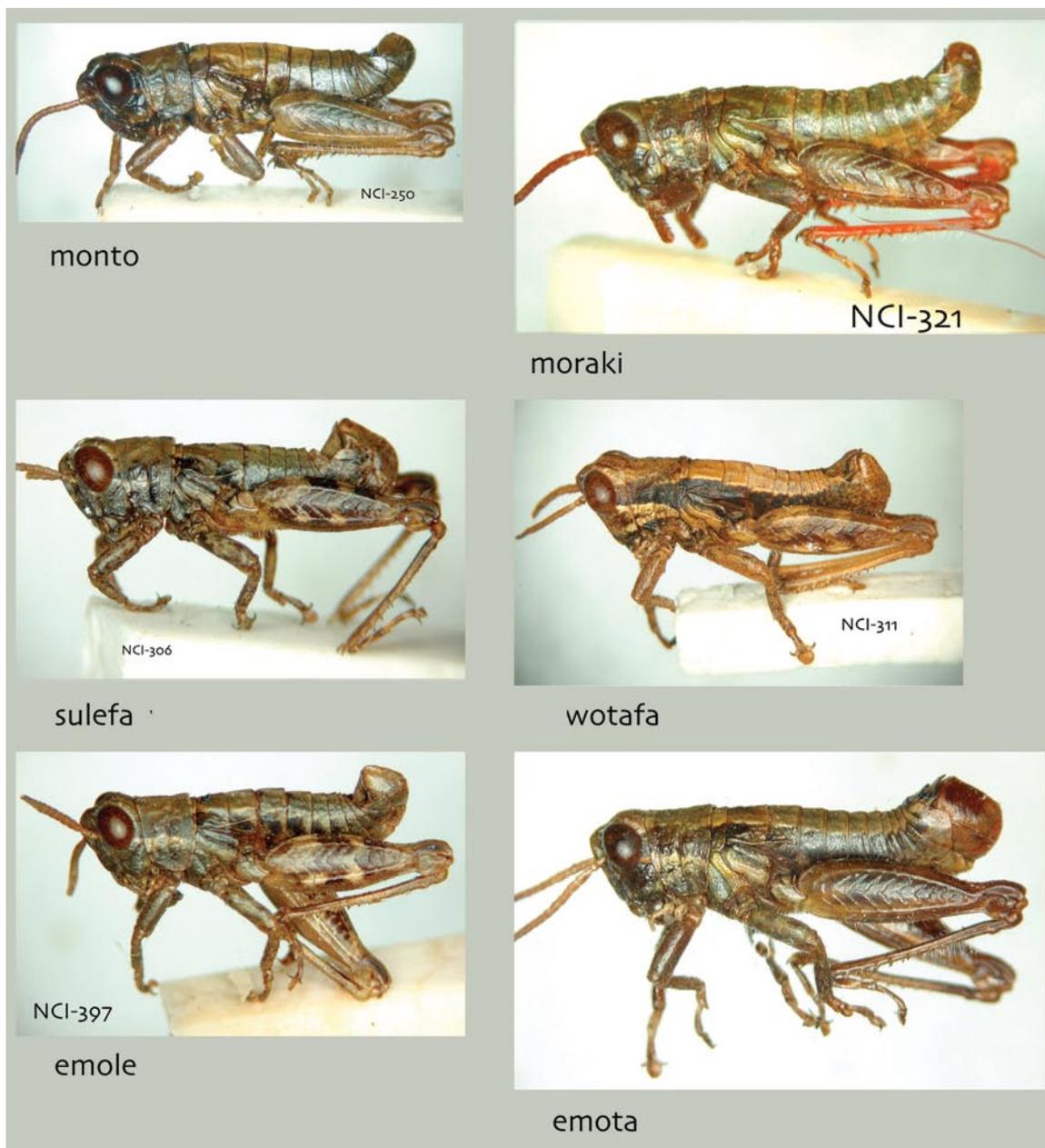


Fig. 6. Portraits of six species of *Leatettix*. The code number are the specimen serial numbers. For measurements see Recognition.

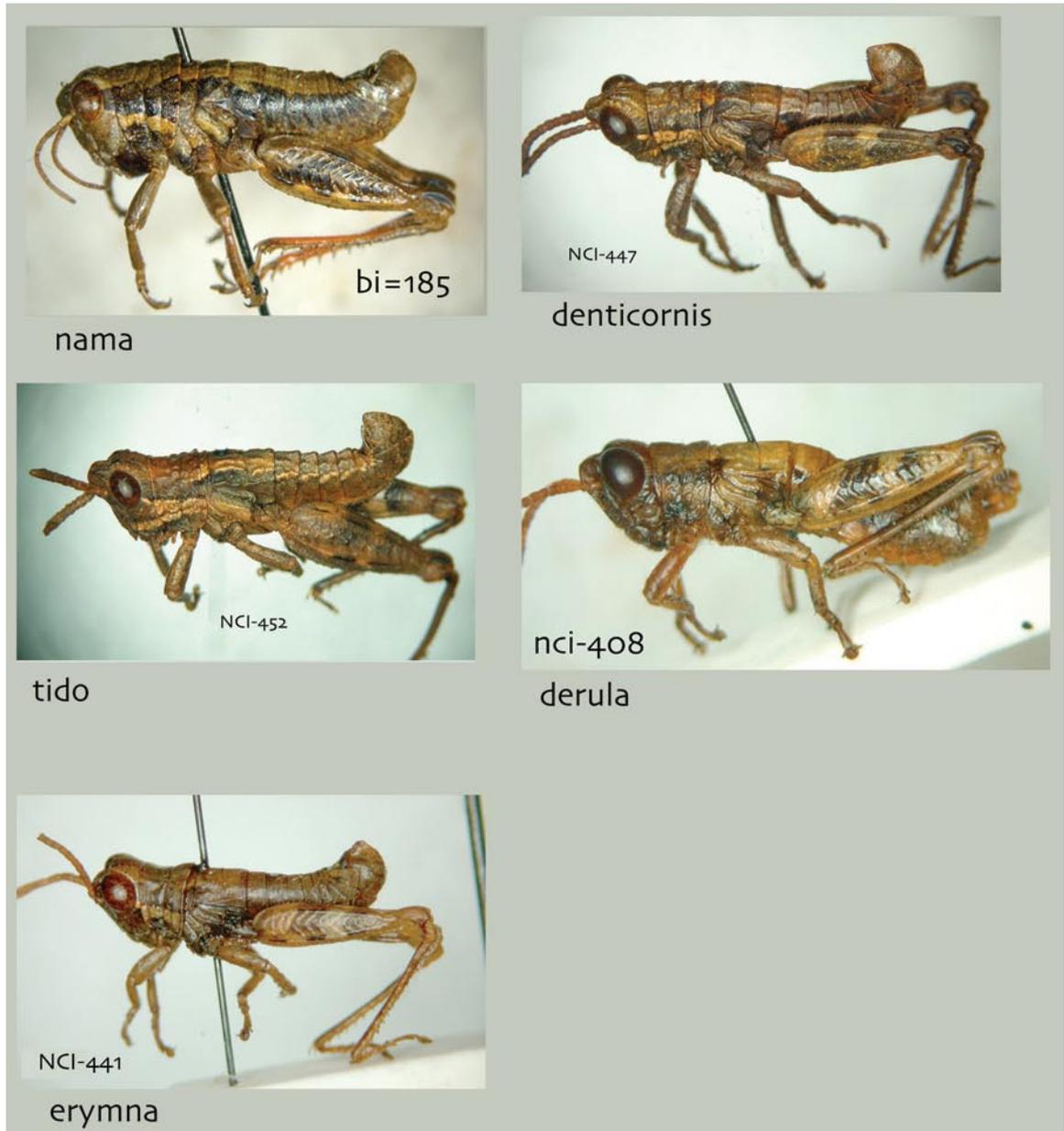


Fig. 7. Portraits of five species of *Leatettix*. The code number are the specimen serial numbers. For measurements see Recognition.

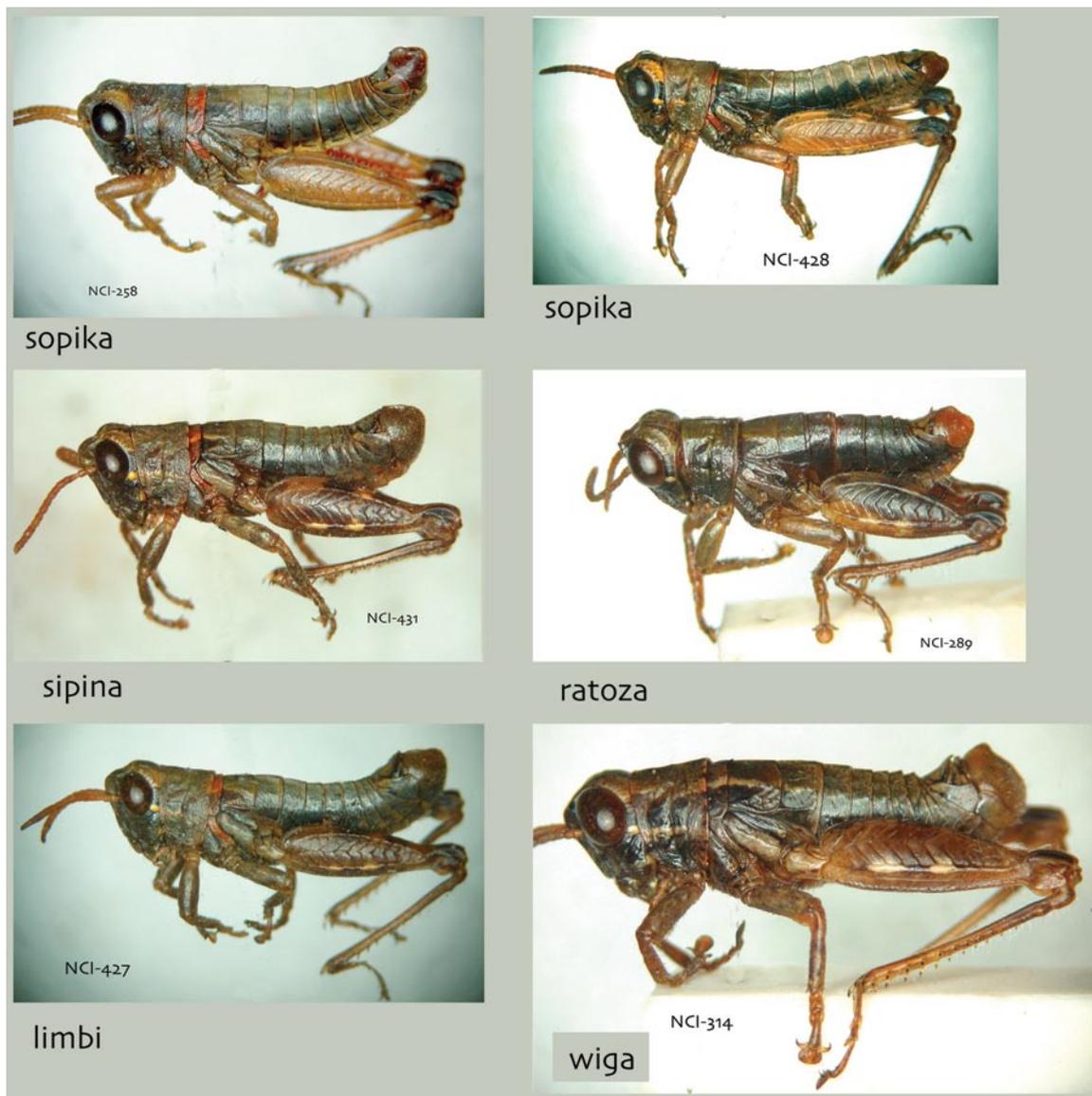


Fig. 8. Portraits of five species of *Leatettix*. The code number are the specimen serial numbers. For measurements see Recognition.

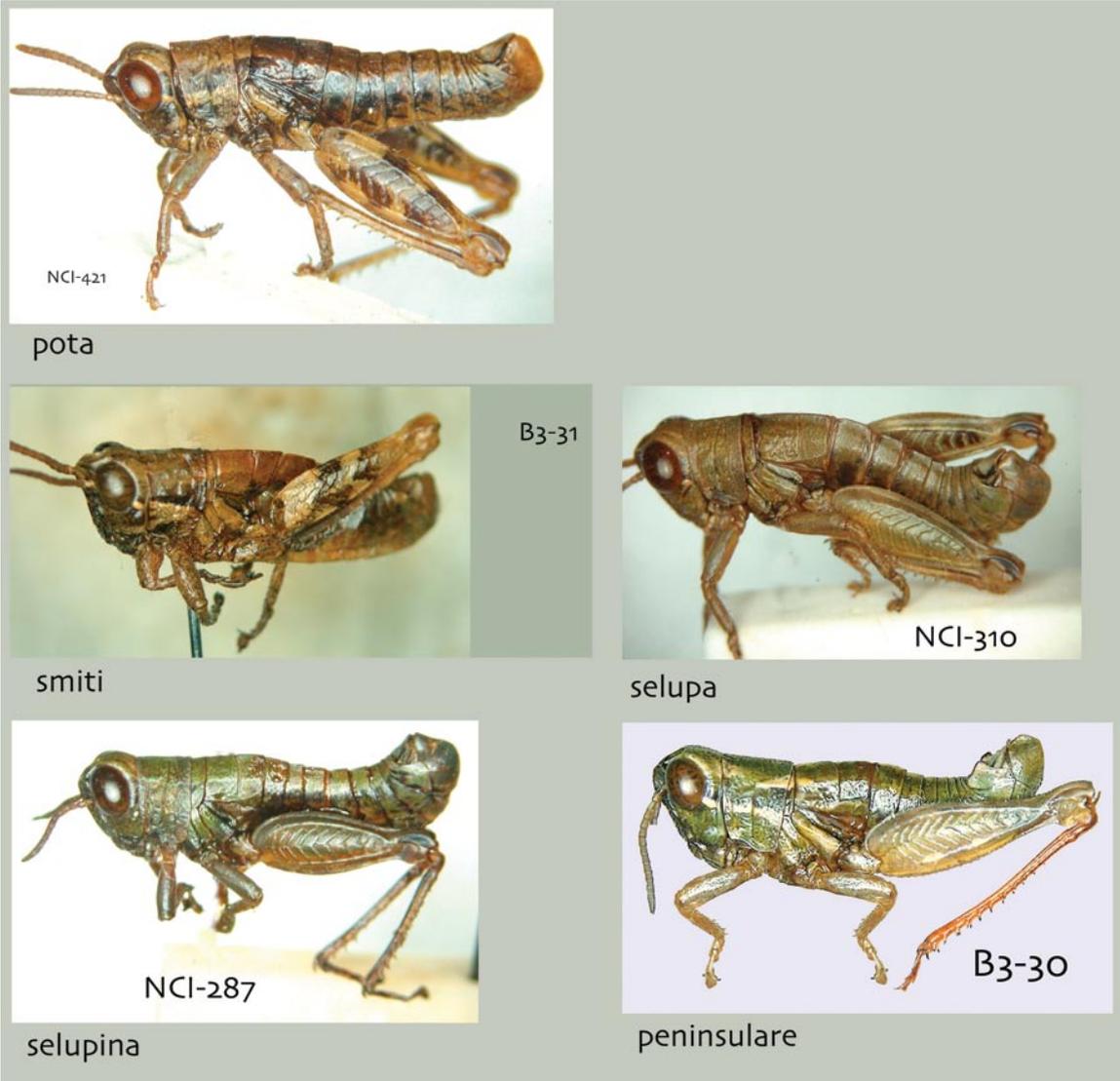


Fig. 9. Portraits of five species of *Leatettix*. The code number are the specimen serial numbers. For measurements see Recognition.

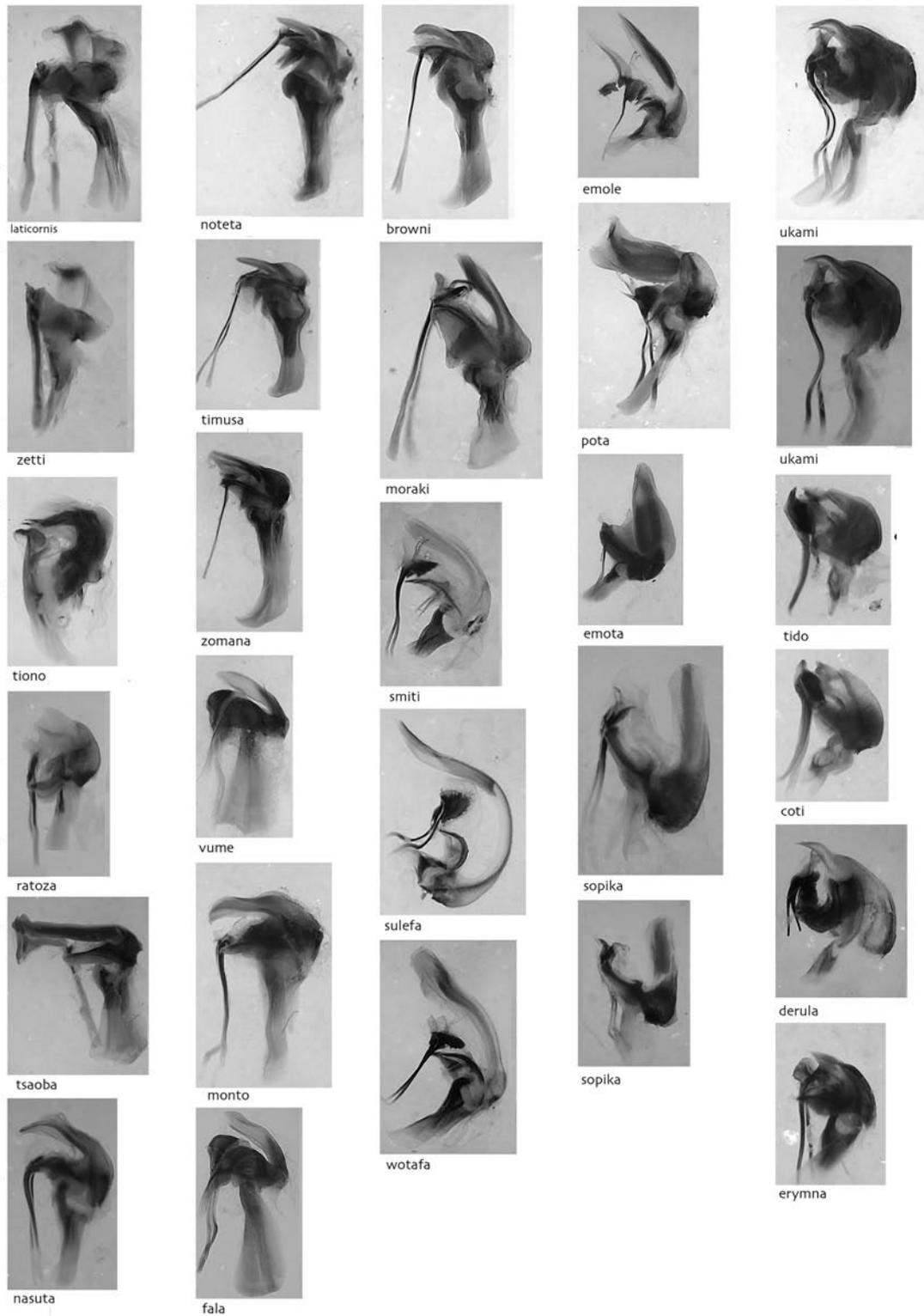


Fig. 10. Comparison of lateral view of male aedeagus in *Leatettix*.

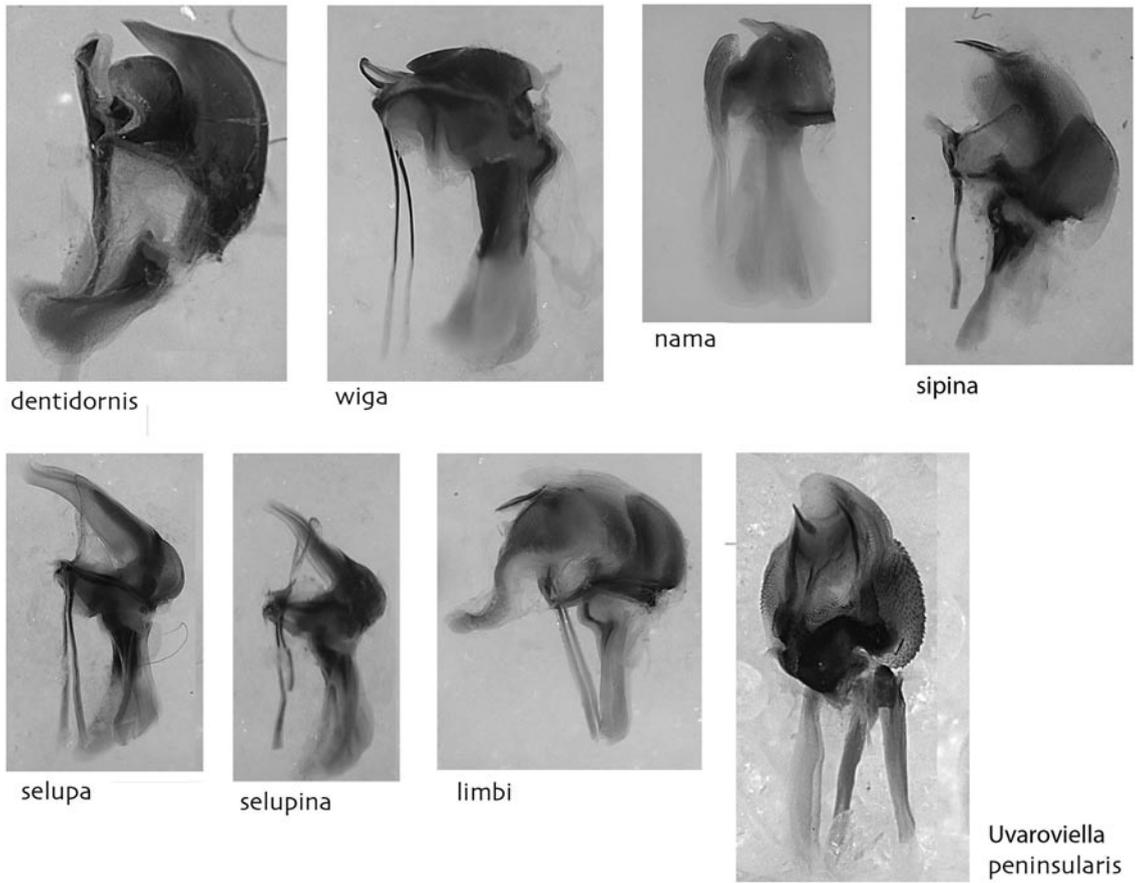


Fig. 11. Comparison of lateral view of male aedeagus in *Leatettix* and *Uvaroviella*.

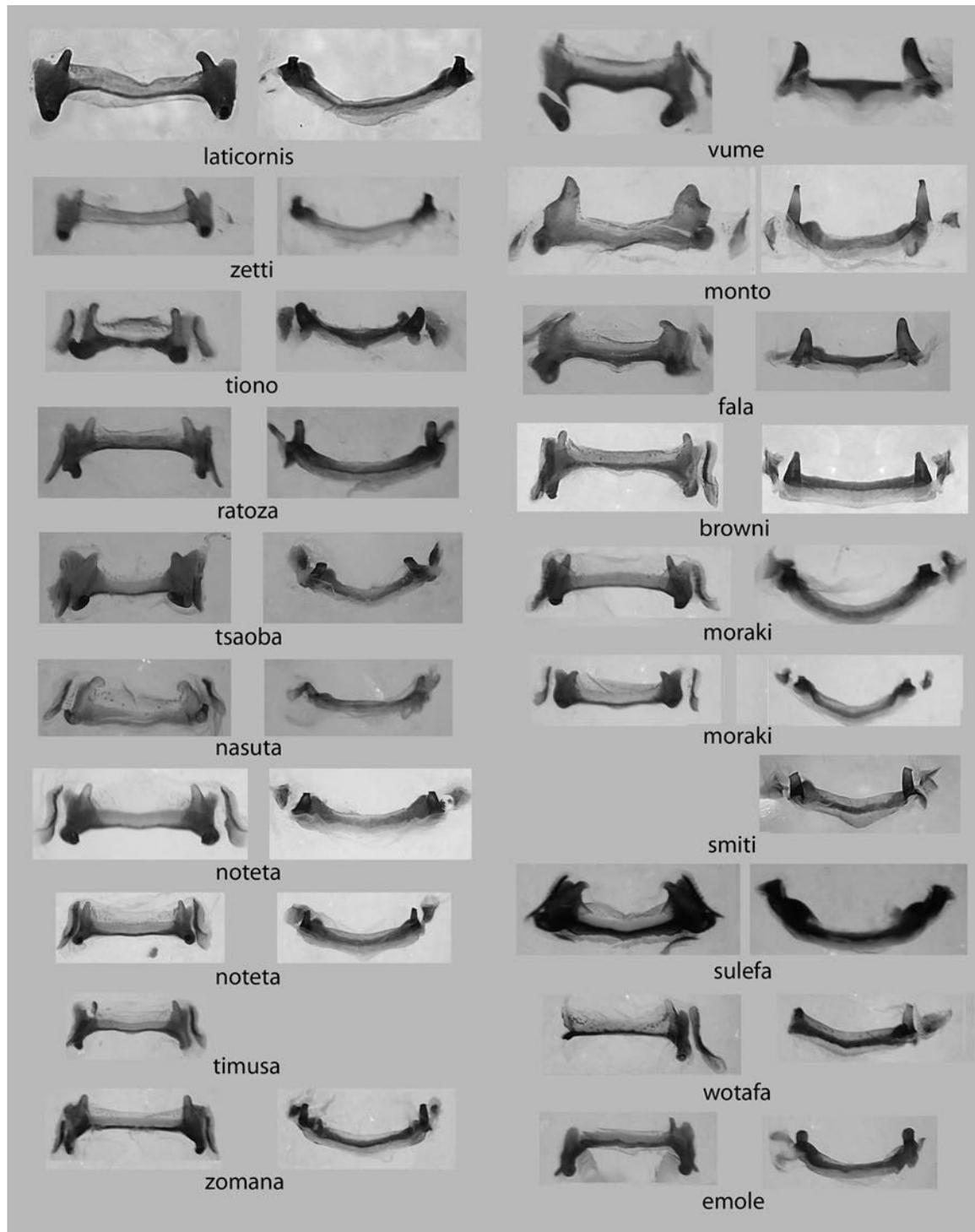


Fig. 12. Comparison of epiphallus of *Leatettix*, showing dorsal and posterior views.

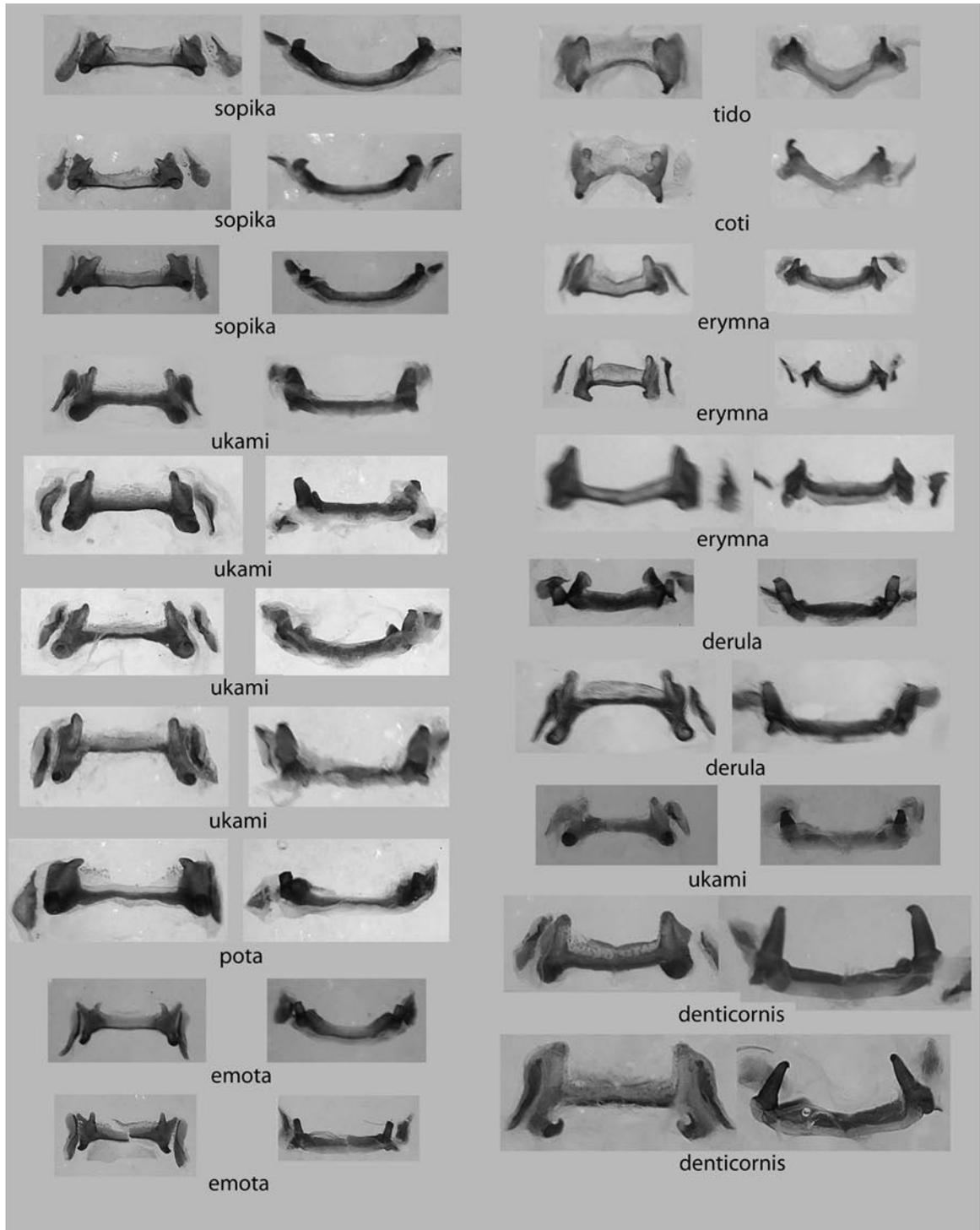


Fig. 13. Comparison of epiphallus of *Leatettix*, showing dorsal and posterior views.

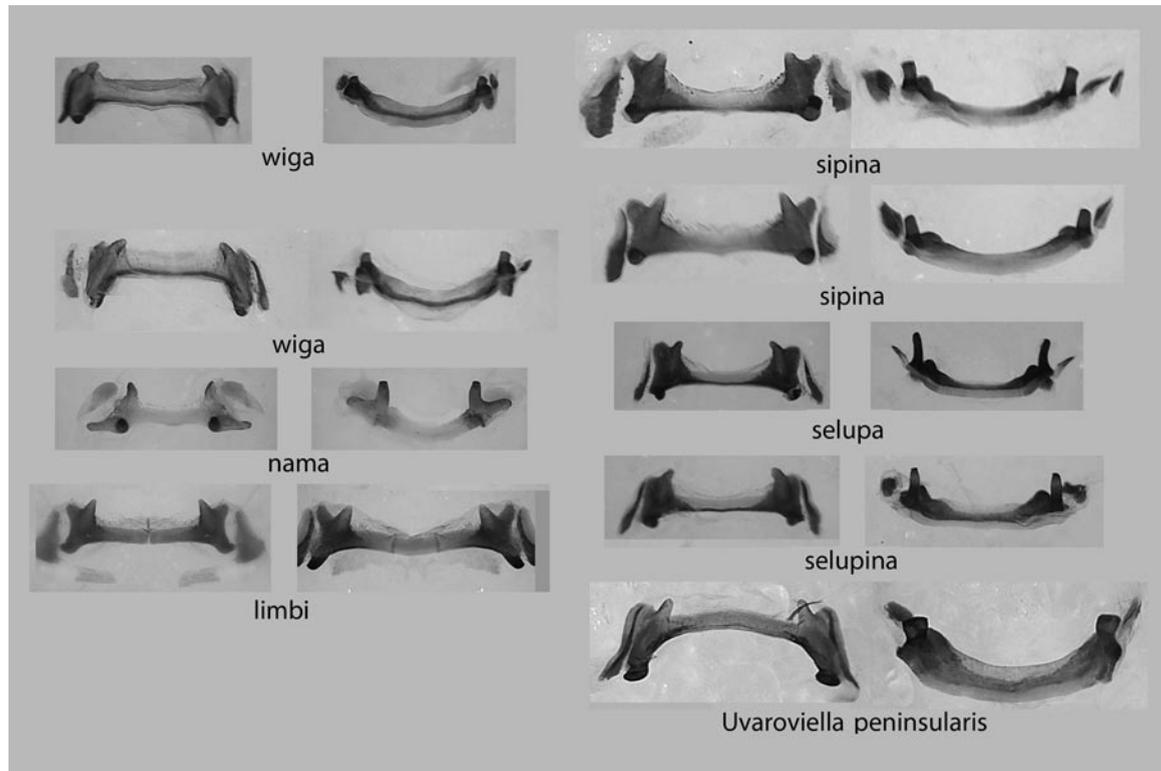


Fig. 14. Comparison of epiphallus of *Leatettix*, showing dorsal and posterior views.

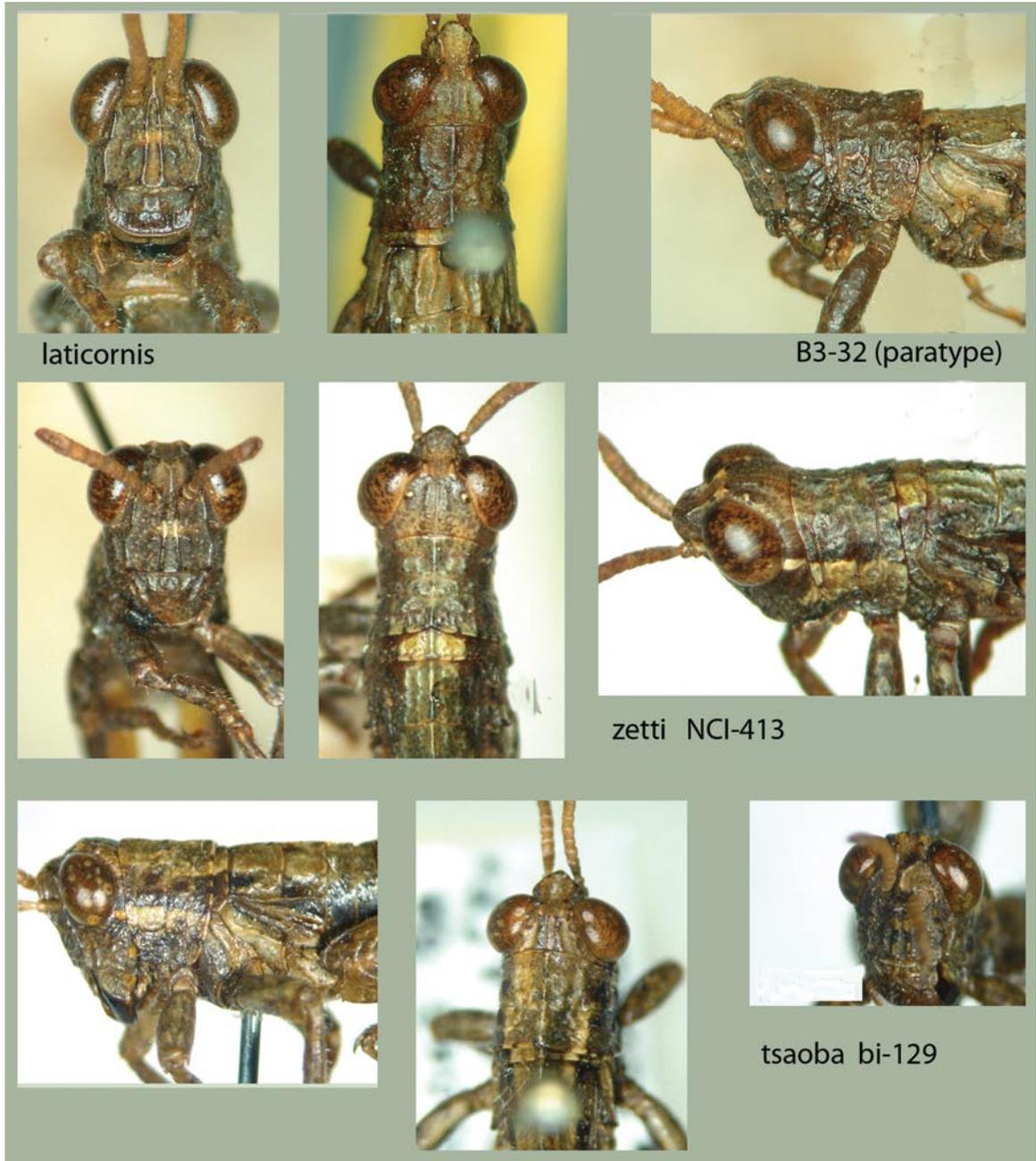


Fig. 15. Comparison of head and thorax in three species of *Leatettix*.

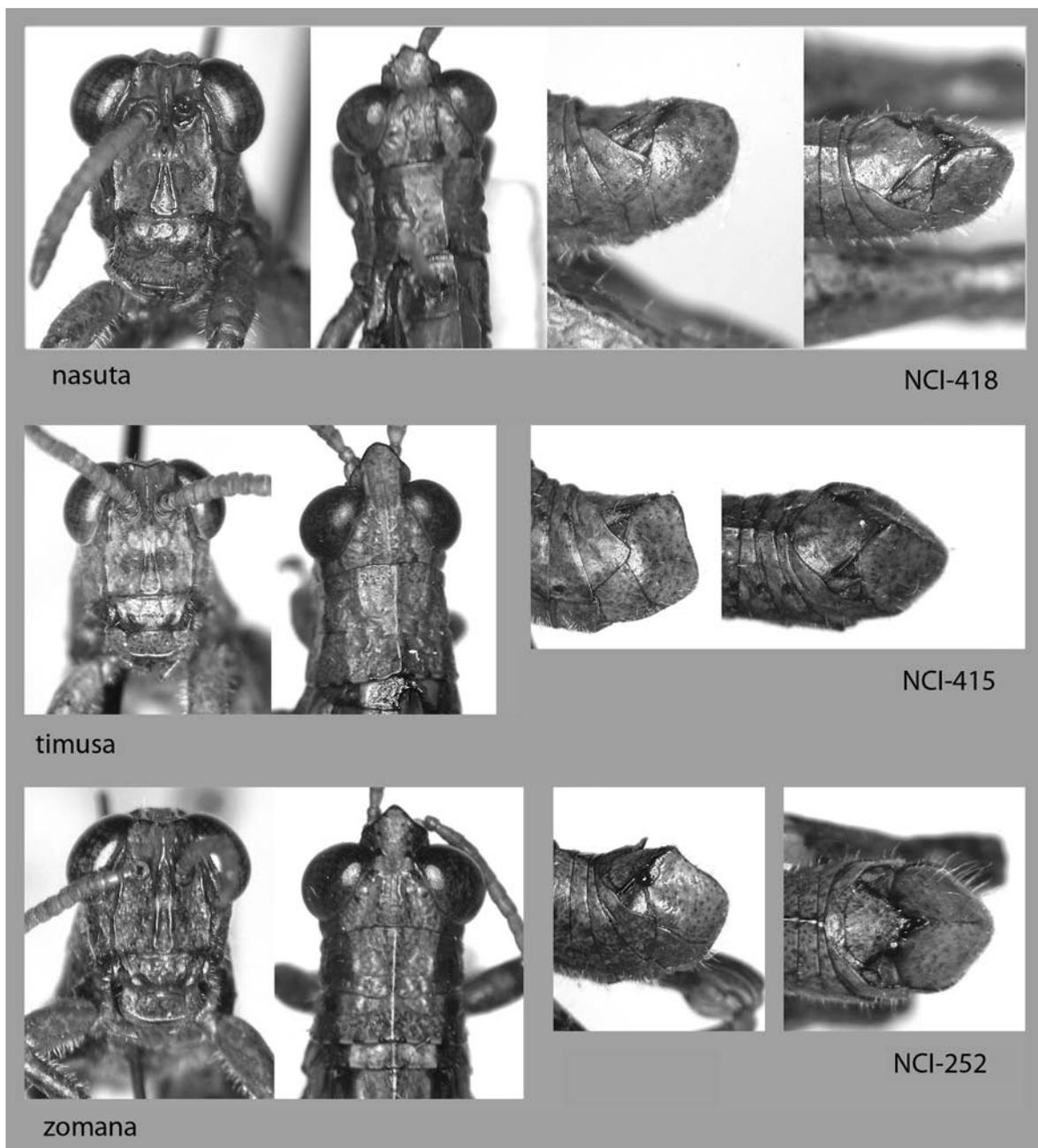


Fig. 16. Comparison of head and thorax in three species of *Leatettix*.

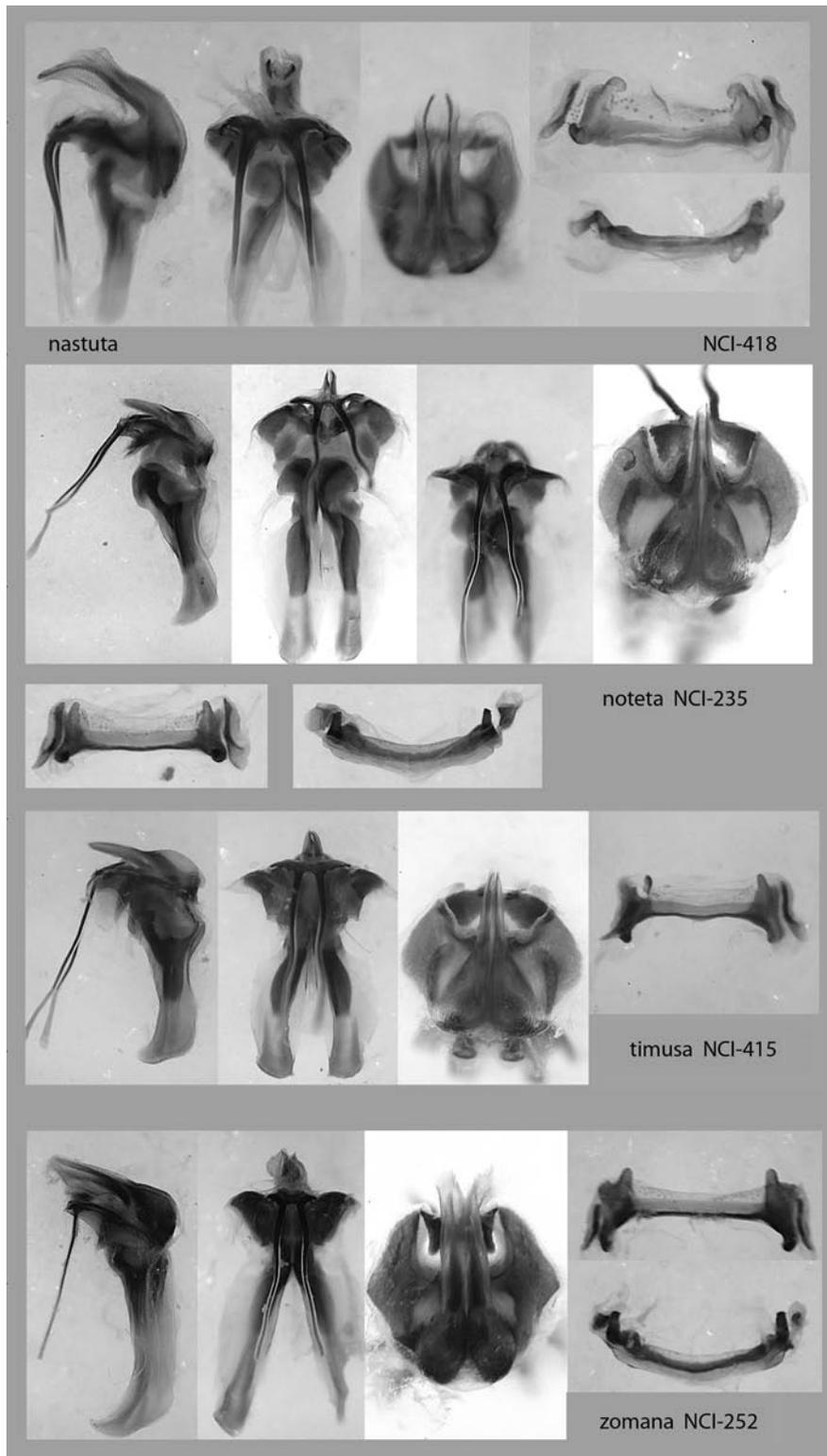


Fig. 17. Comparison of genitalia in *Leatettix*. (Showing lateral dorsal, and ventral view of aedeagus and dorsal and posterior views of epiphallus).

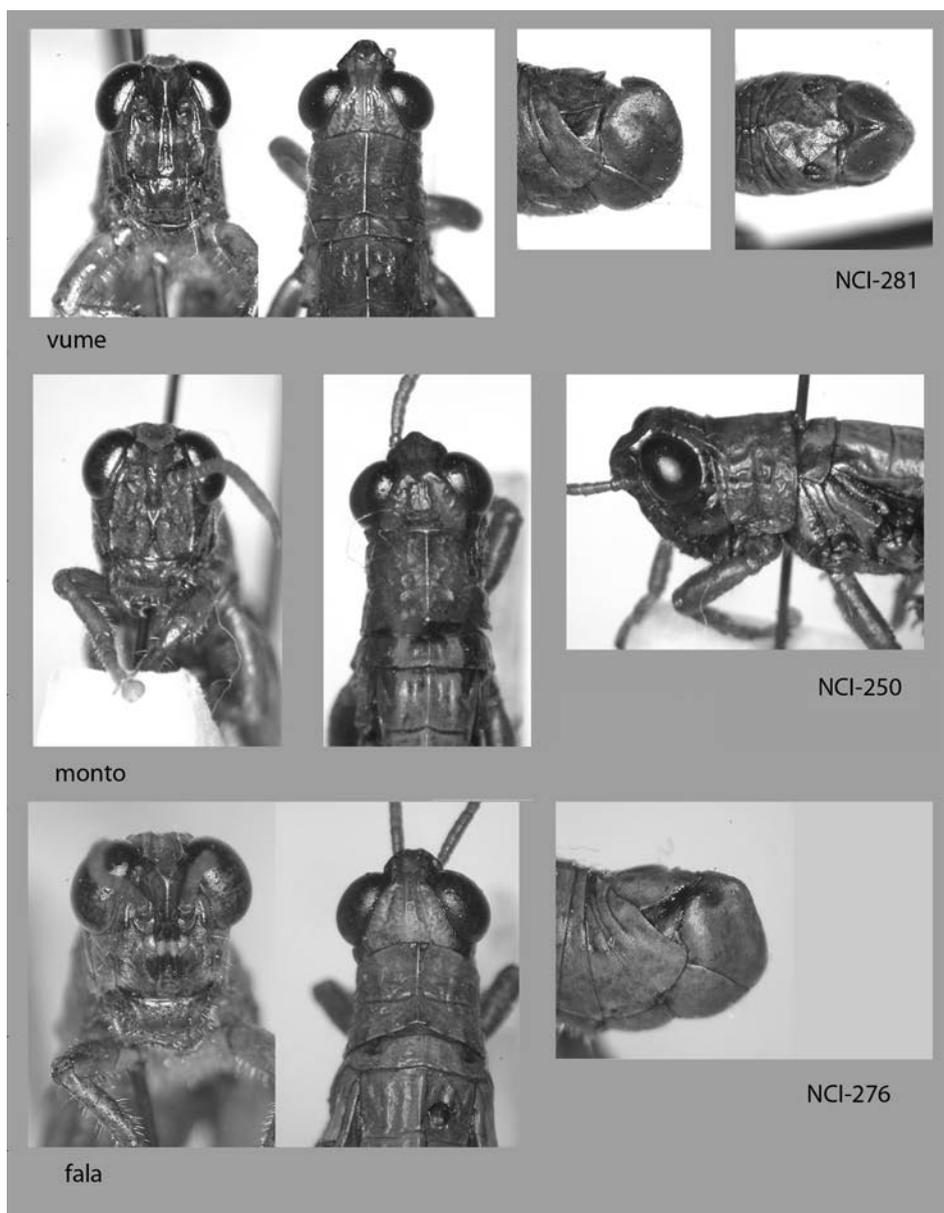


Fig. 18. Comparison of head and thorax in three species of *Leatettix*.

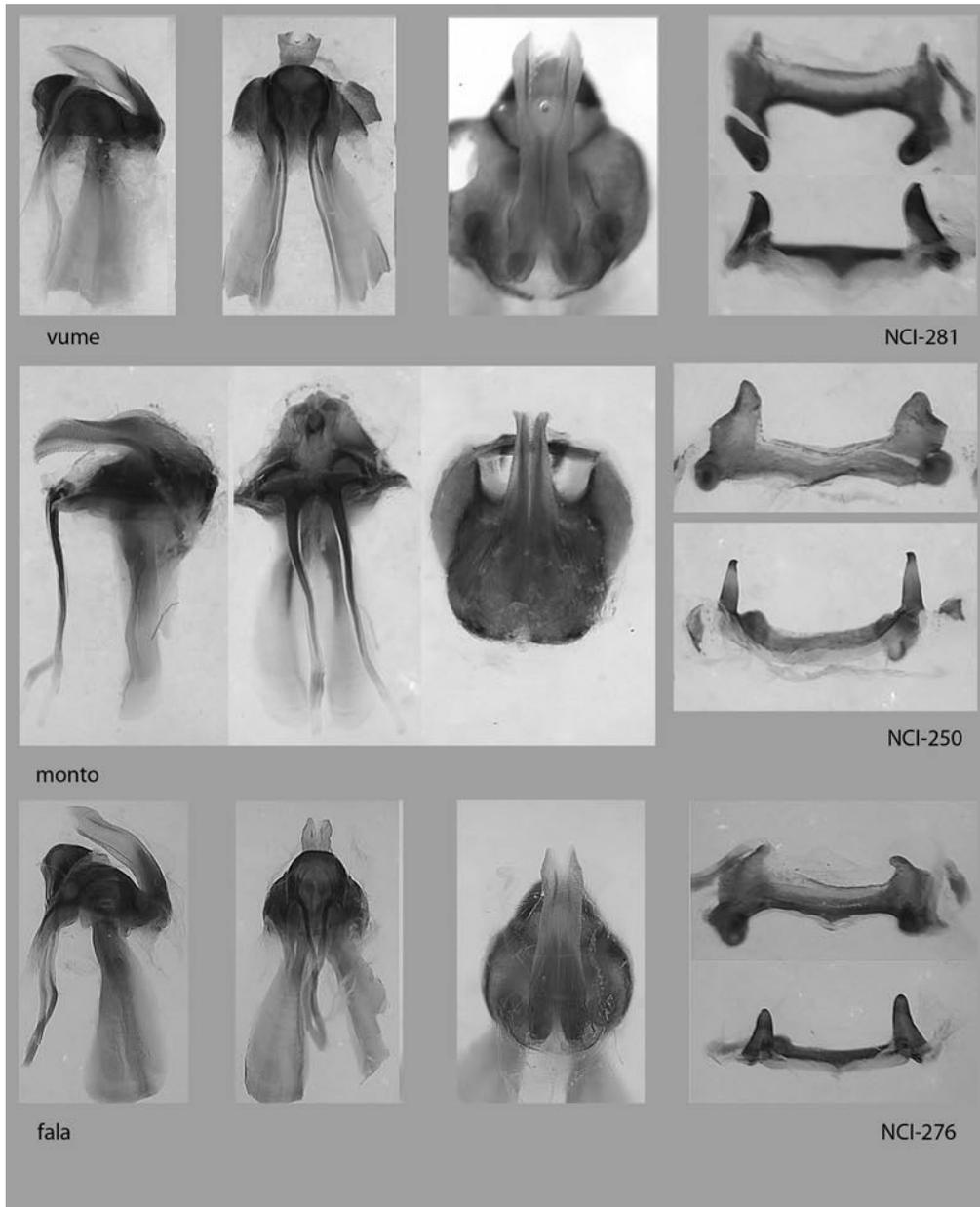


Fig. 19. Comparison of genitalia in *Leatettix*. (Showing lateral dorsal, and ventral view of aedeagus and dorsal and posterior views of epiphallus).

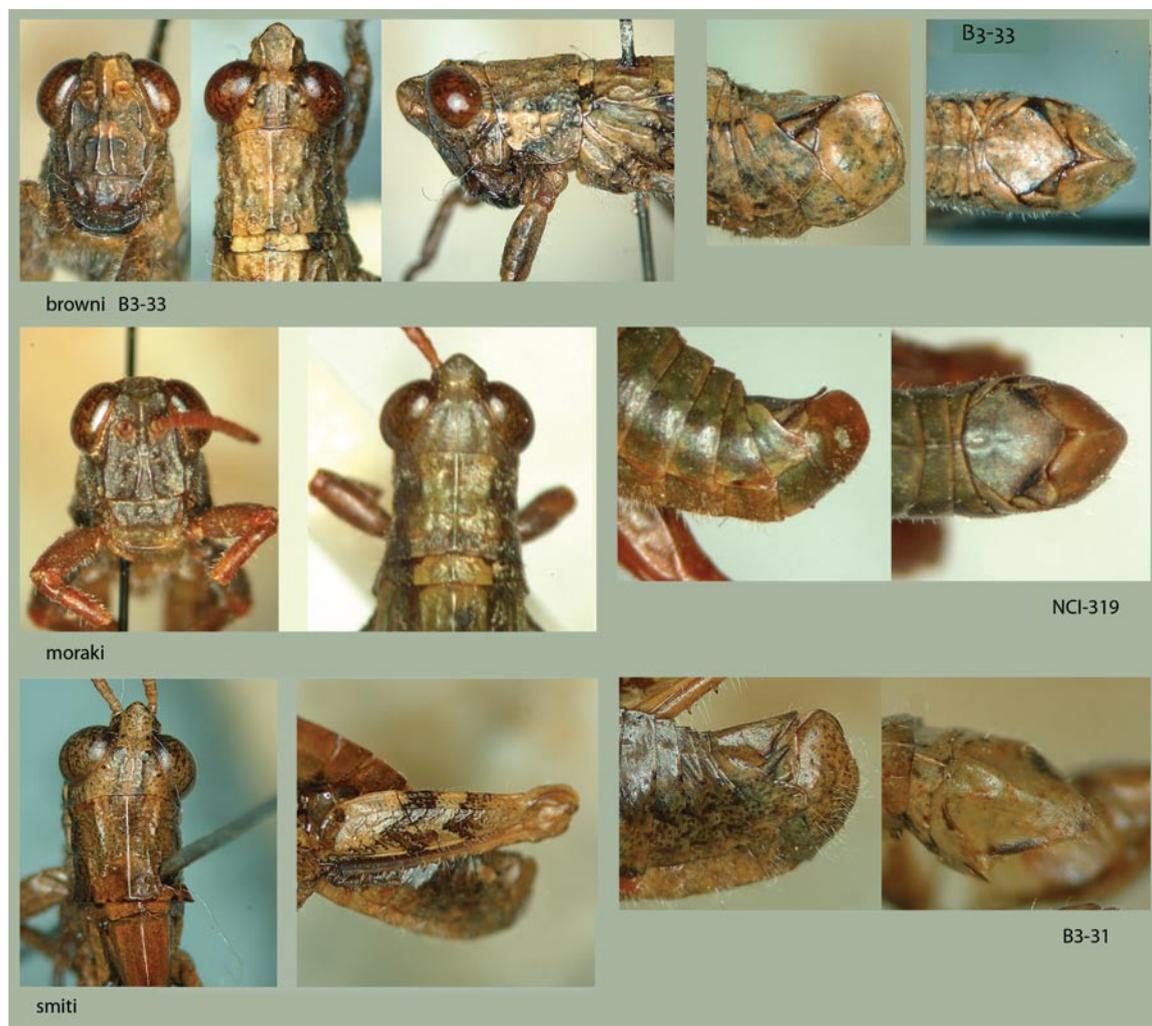


Fig. 20. Comparison of head, thorax and end of abdomen in three species of *Leatettix*.

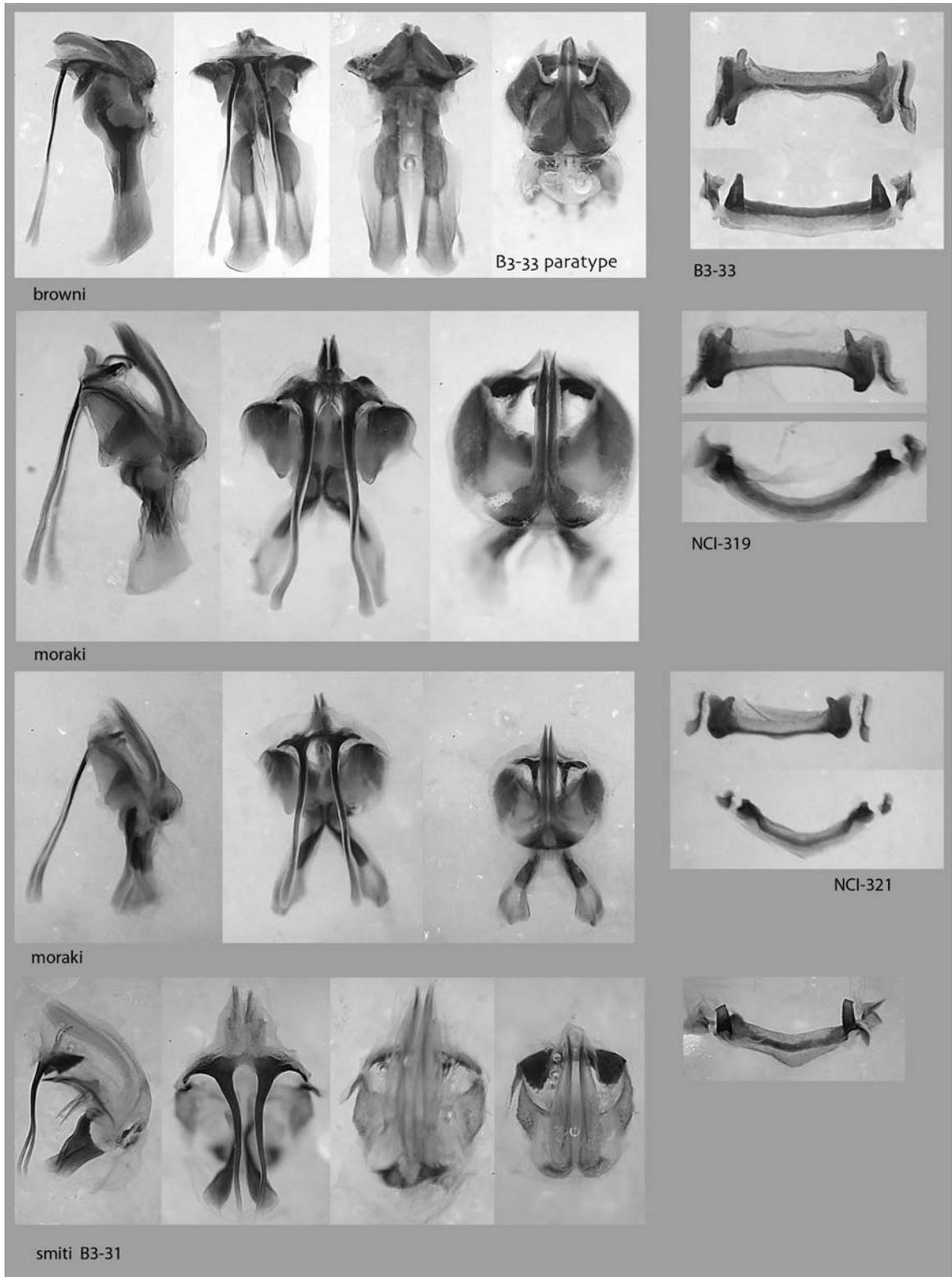


Fig. 21. Comparison of genitalia in *Leatettix*. (Showing lateral dorsal, and ventral view of aedeagus and dorsal and posterior views of epiphallus).

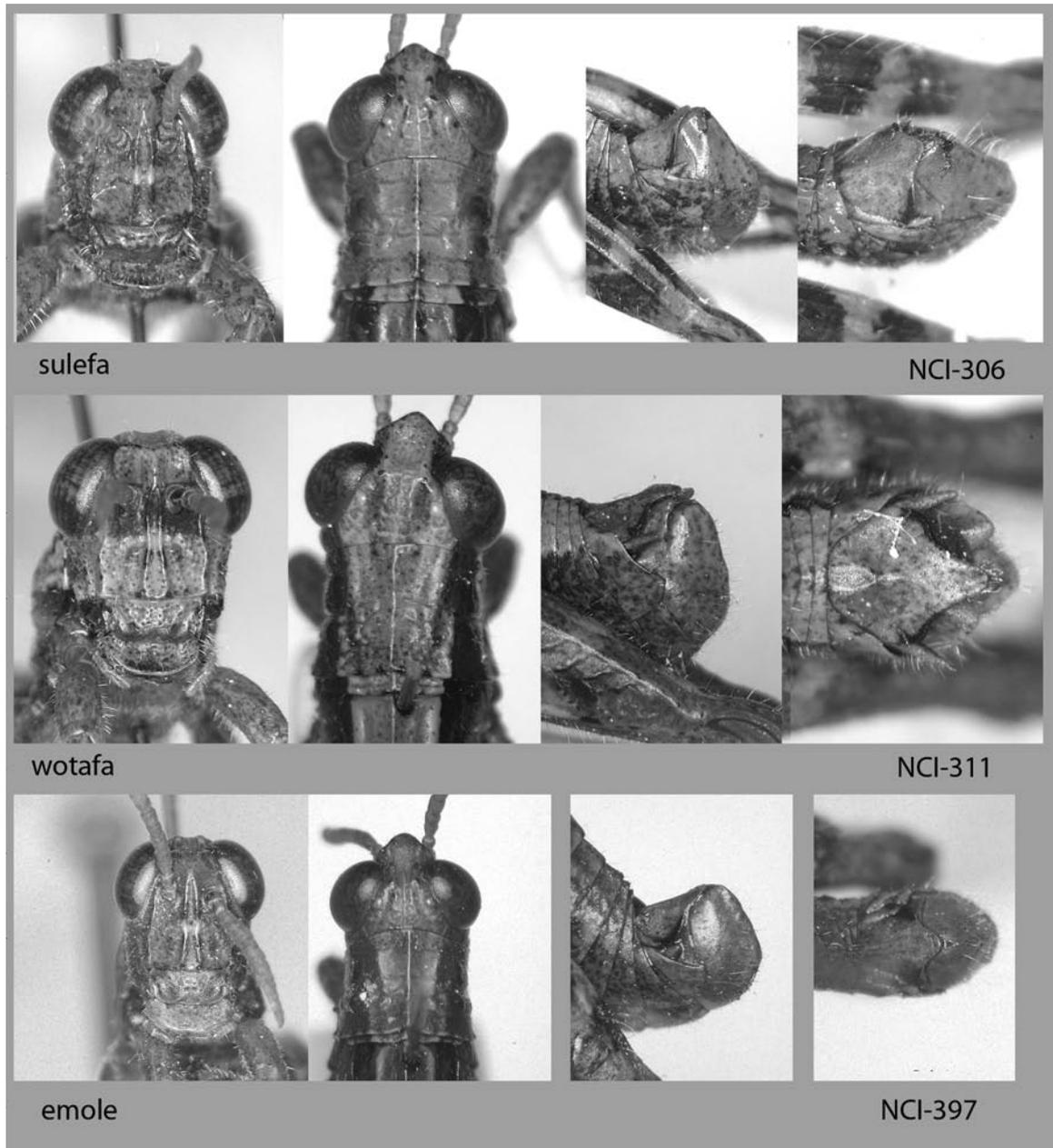


Fig. 22. Comparison of head, thorax and end of abdomen in three species of *Leatettix*.

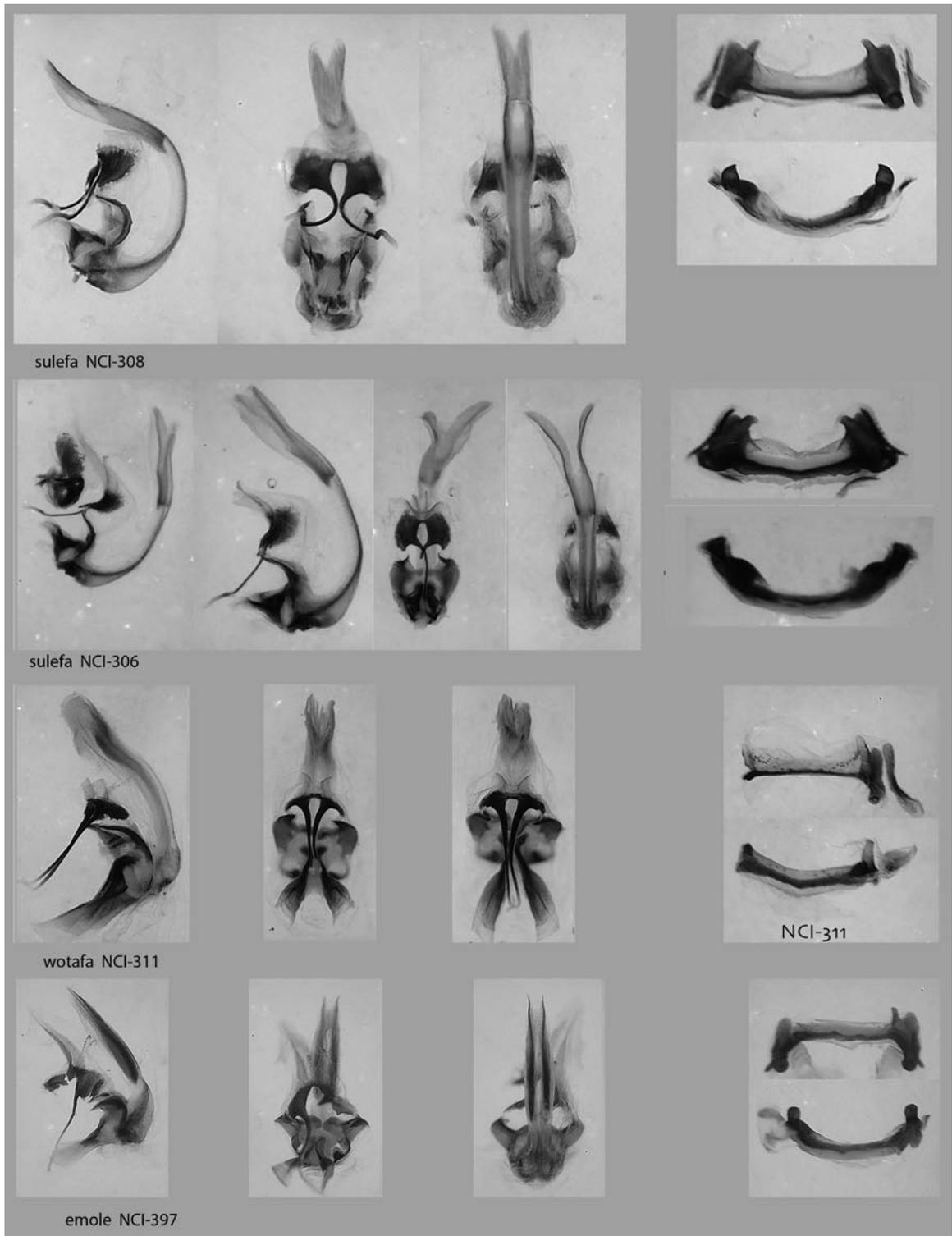


Fig. 23. Comparison of genitalia in *Leatettix*. (Showing lateral dorsal, and ventral view of aedeagus and dorsal and posterior views of epiphallus).

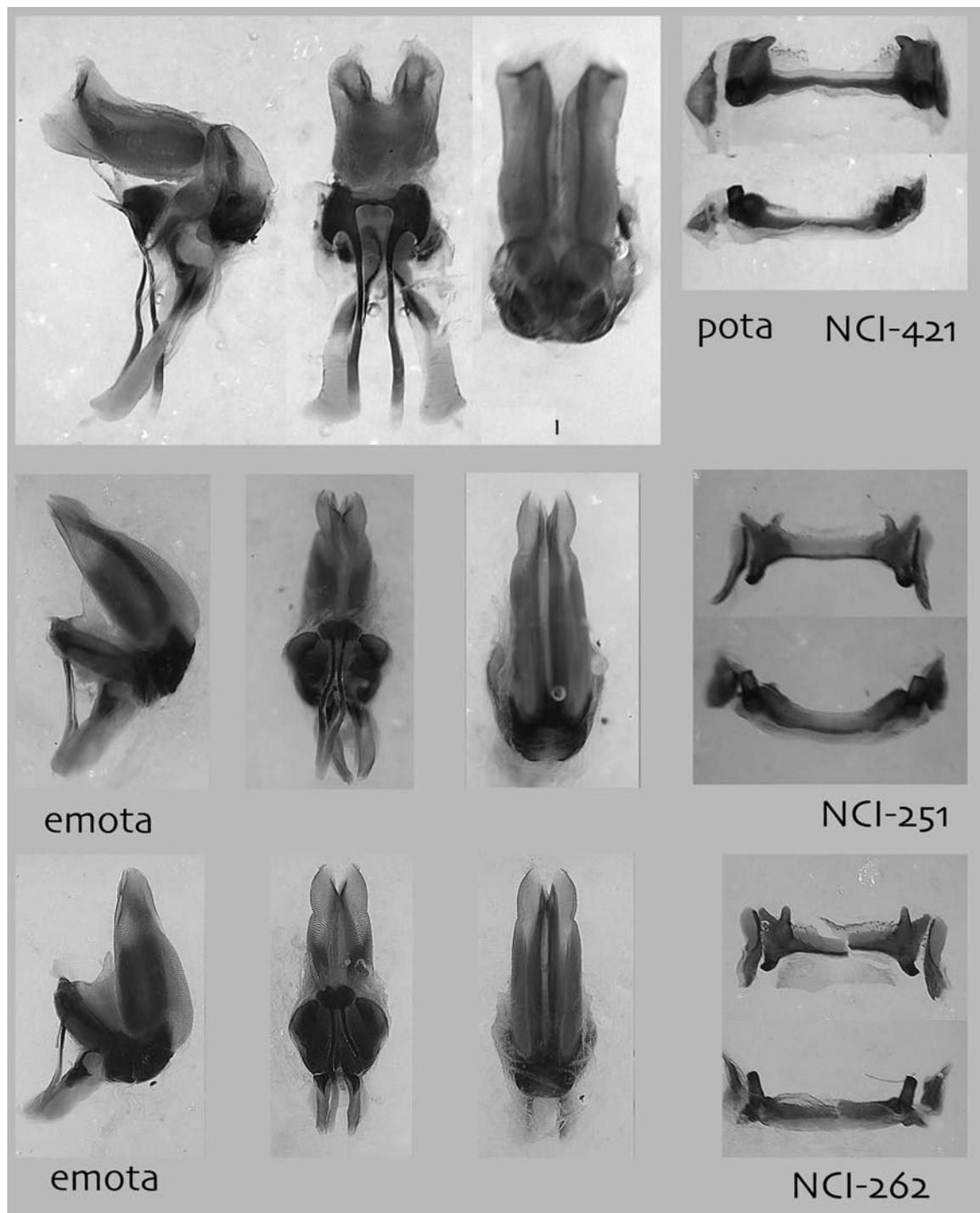


Fig. 24. Comparison of genitalia in *Leatettix*. (Showing lateral dorsal, and ventral view of aedeagus and dorsal and posterior views of epiphallus).

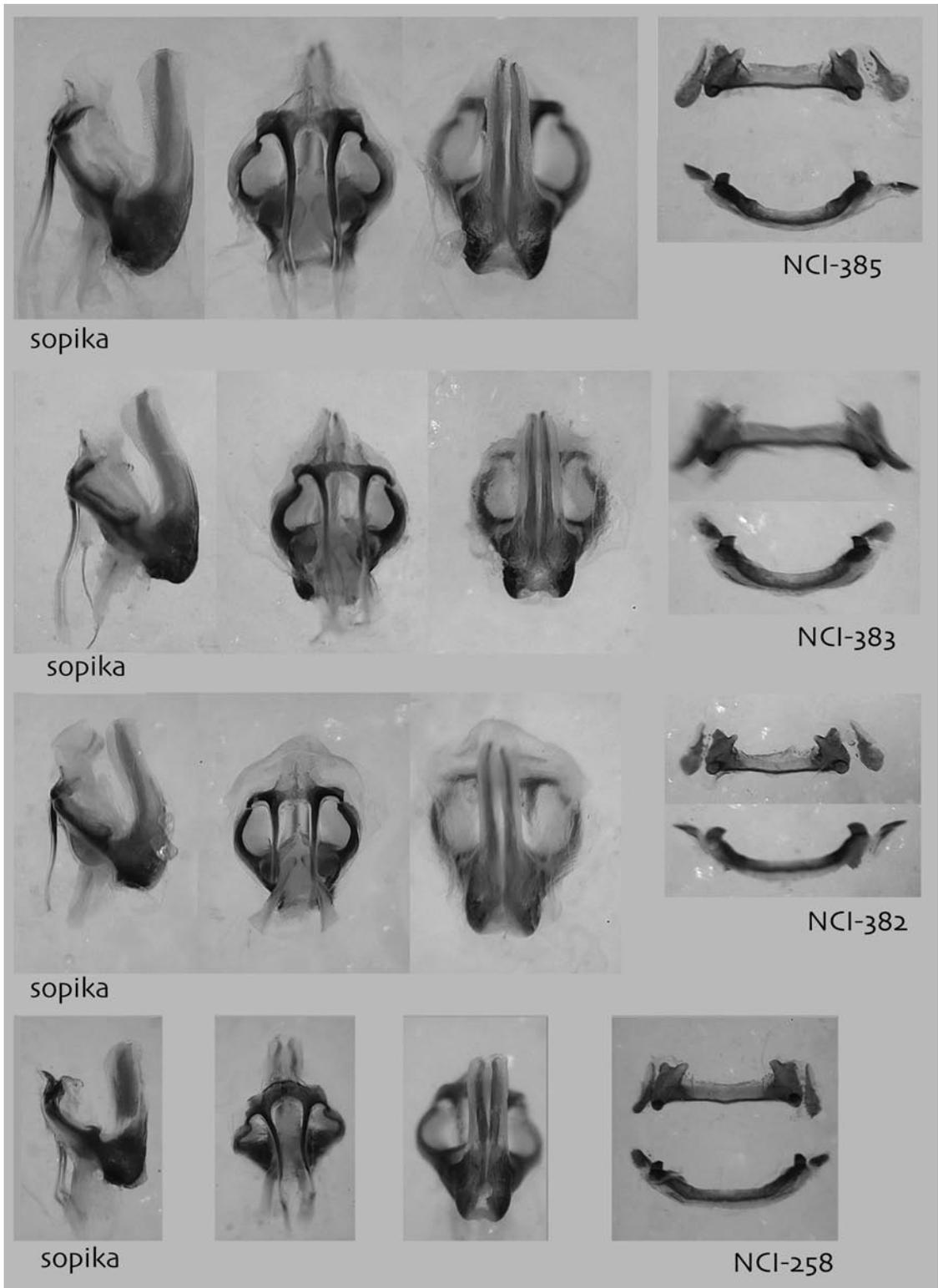


Fig. 25. Comparison of genitalia in *Leatettix*. (Showing lateral dorsal, and ventral view of aedeagus and dorsal and posterior views of epiphallus).

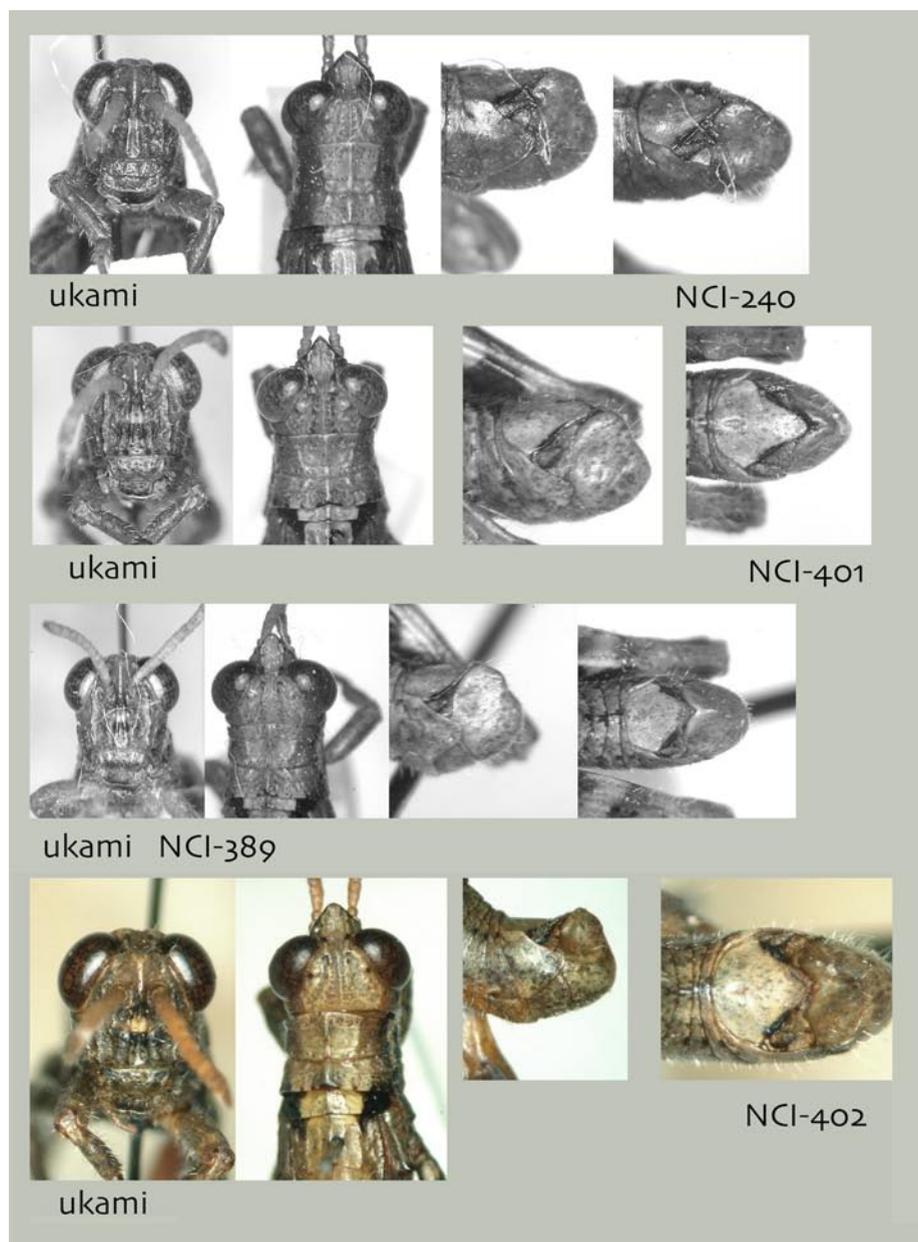


Fig. 26. Comparison of head, thorax and end of abdomen in *Leatettix ukami*.

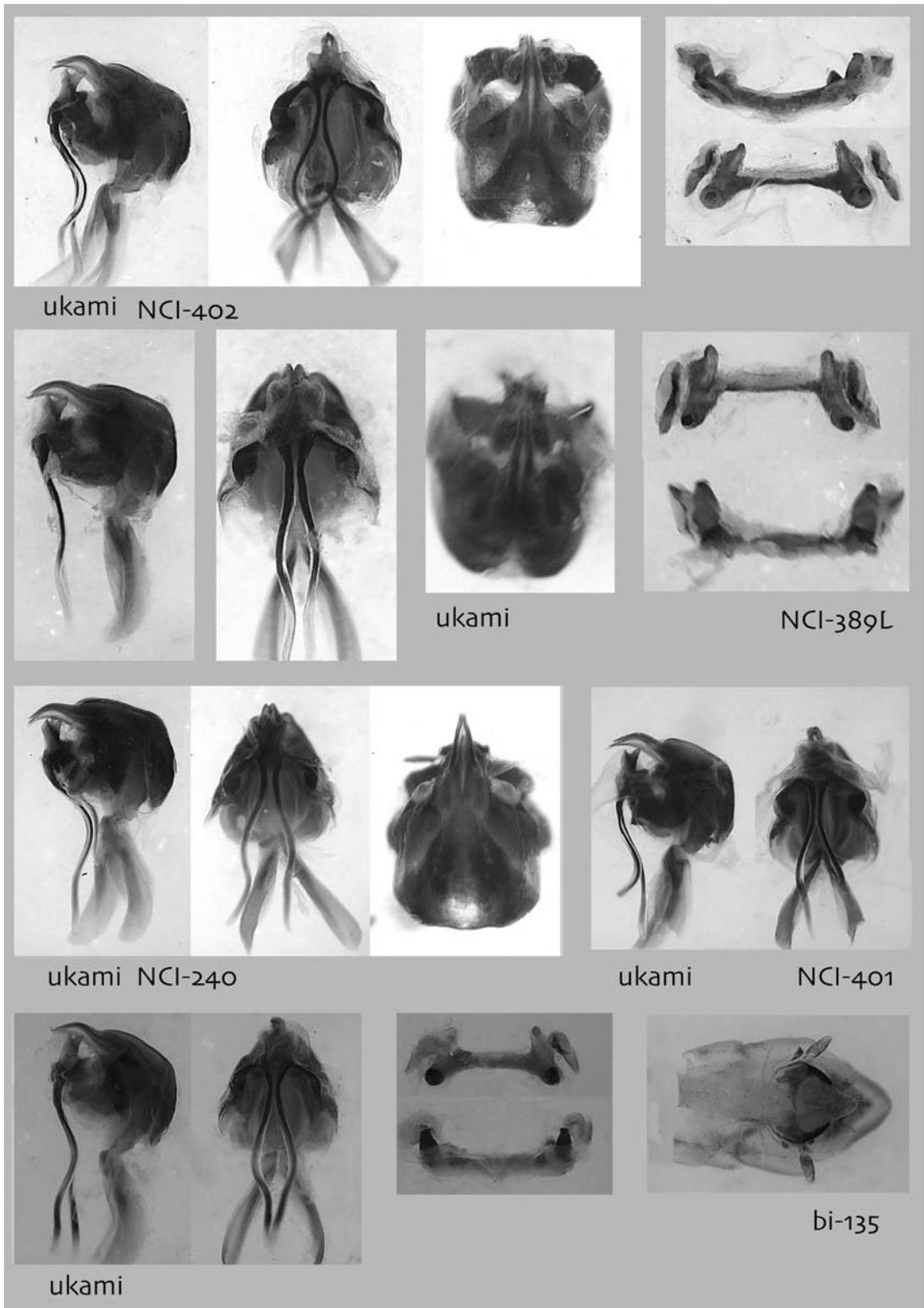


Fig. 27. Comparison of genitalia in *Leatettix*. (Showing lateral dorsal, and ventral view of aedeagus and dorsal and posterior views of epiphallus).

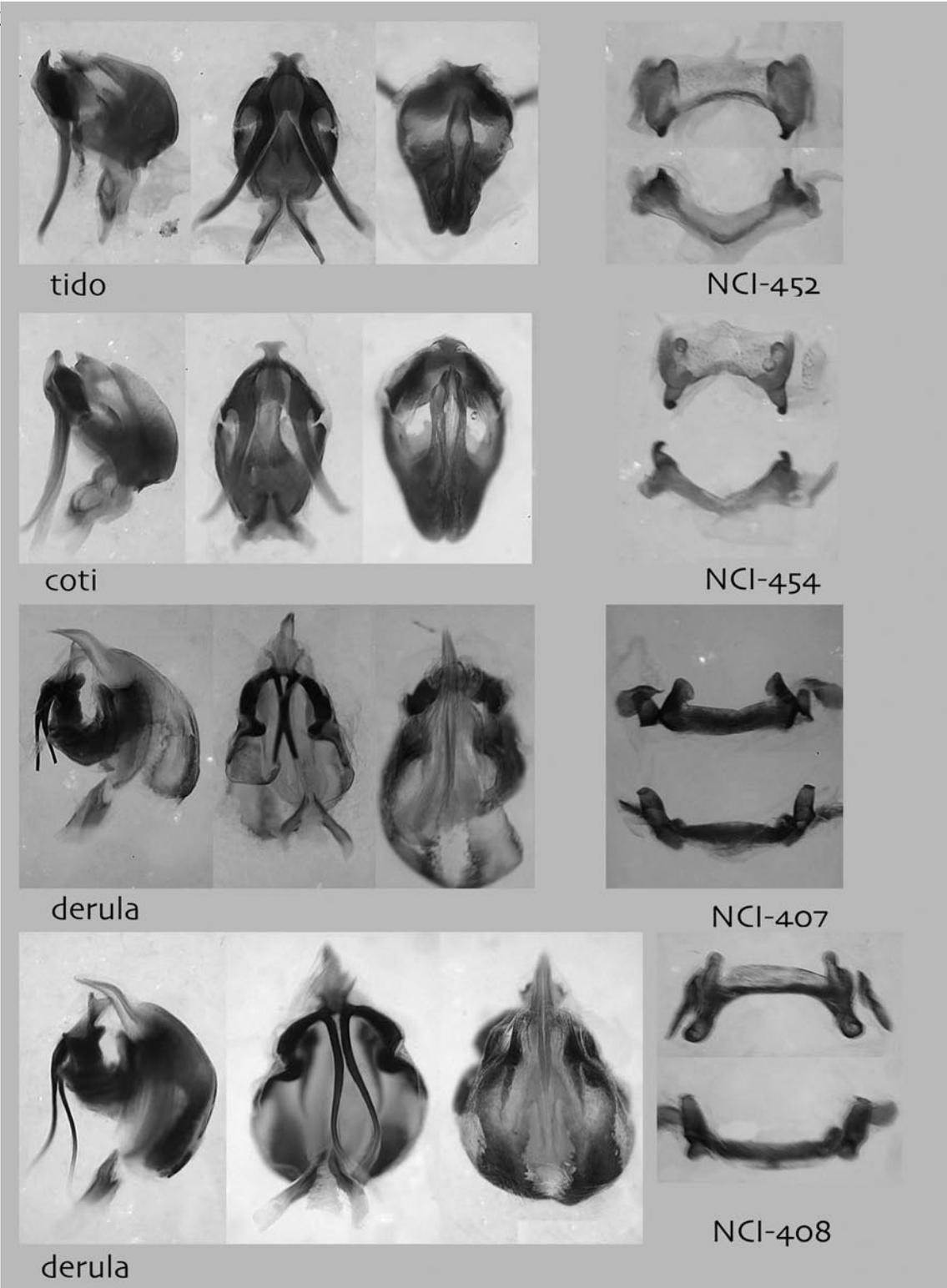


Fig. 28. Comparison of genitalia in *Leatettix*. (Showing lateral dorsal, and ventral view of aedeagus and dorsal and posterior views of epiphallus).

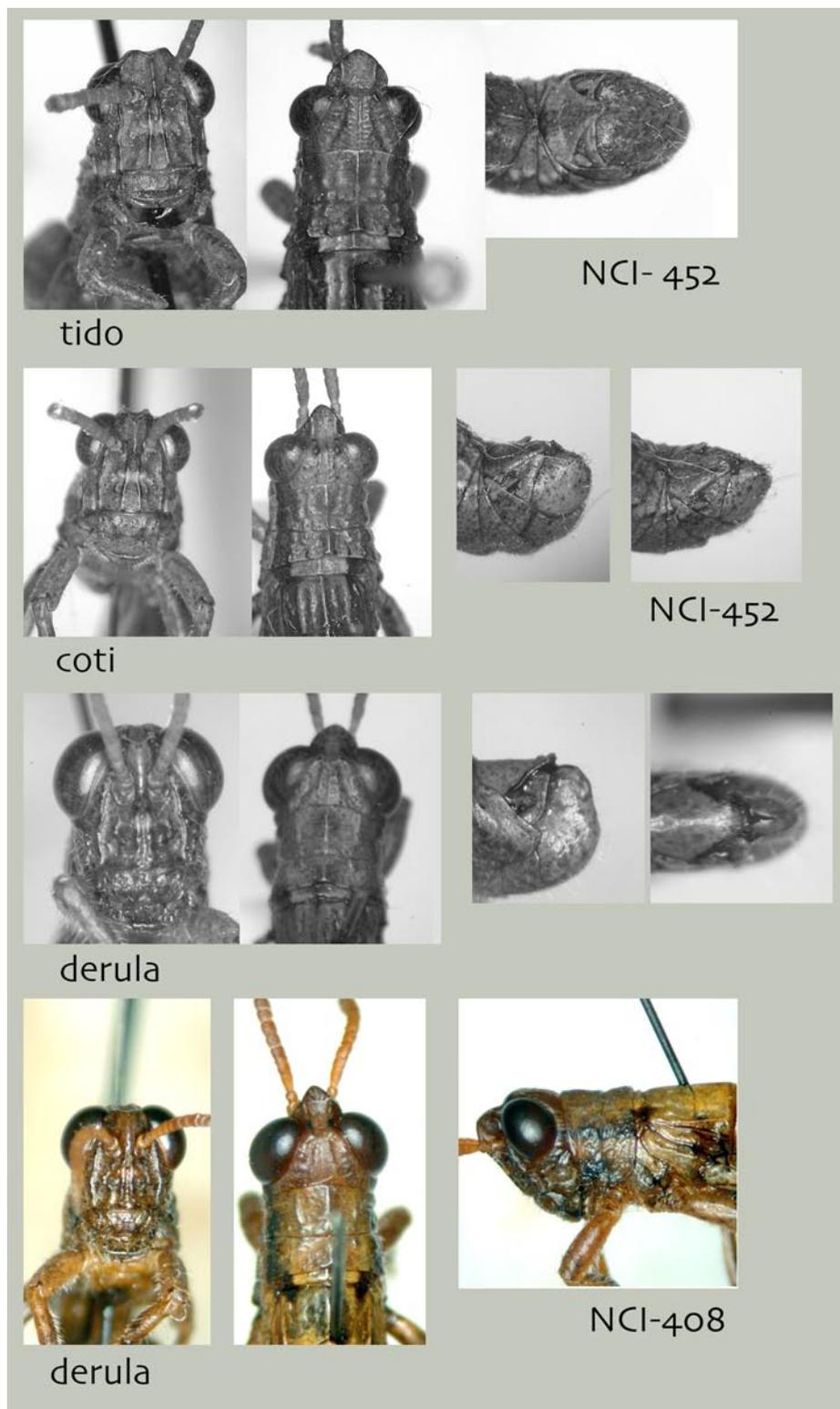


Fig. 29. Comparison of head, thorax and end of abdomen in three species of *Leatettix*.

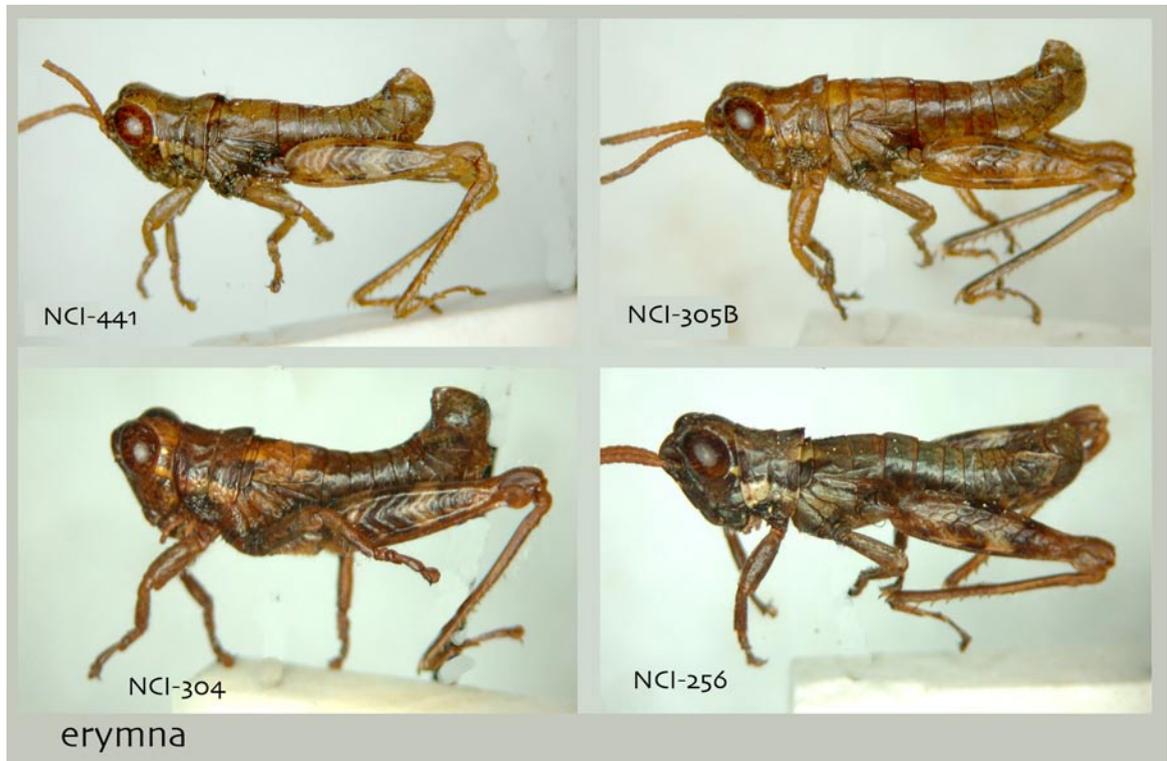


Fig. 30. Four portraits of *Leattettix erymna*.

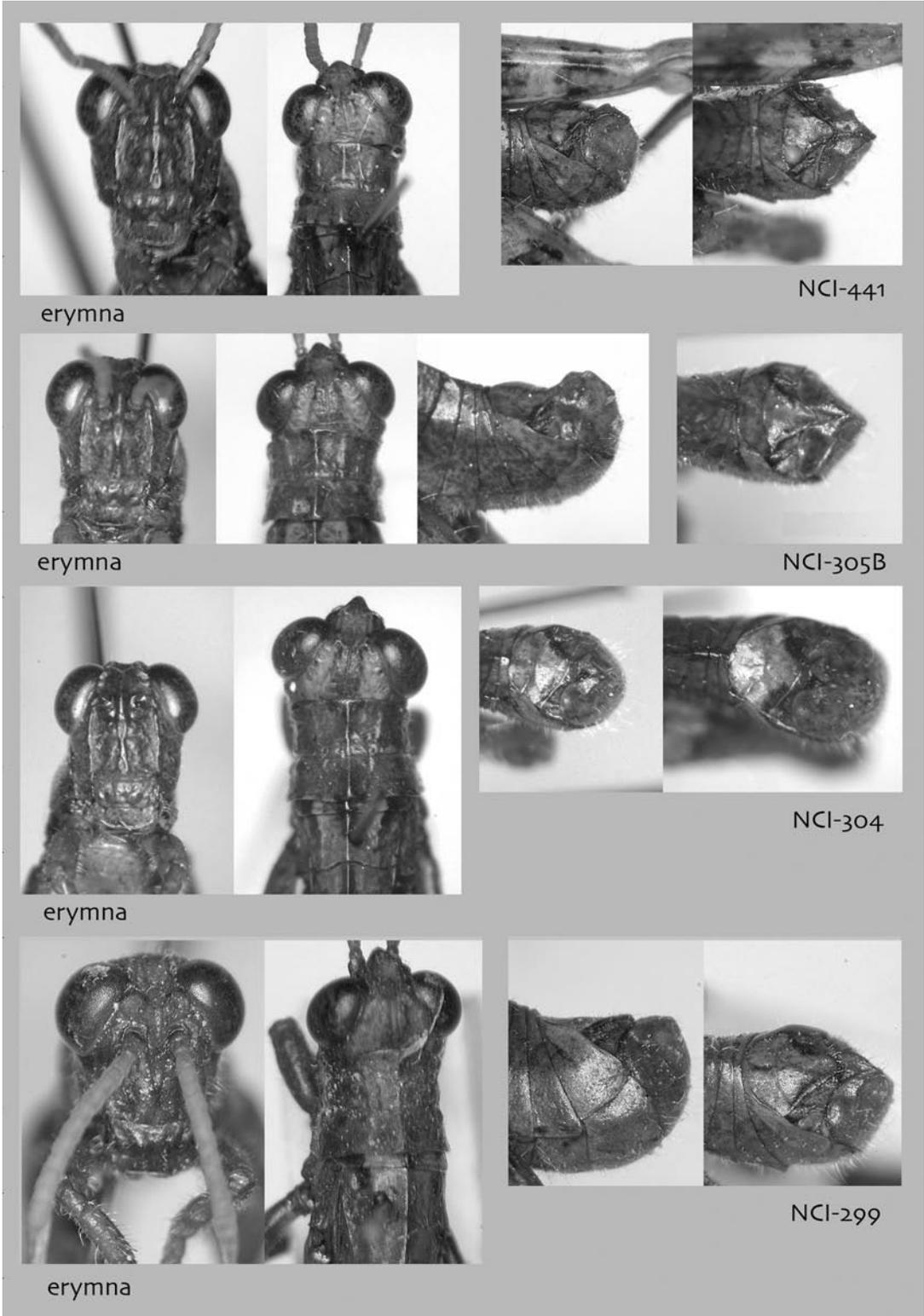


Fig. 31. Comparison of head, thorax and end of abdomen in three species of *Leatettix*.

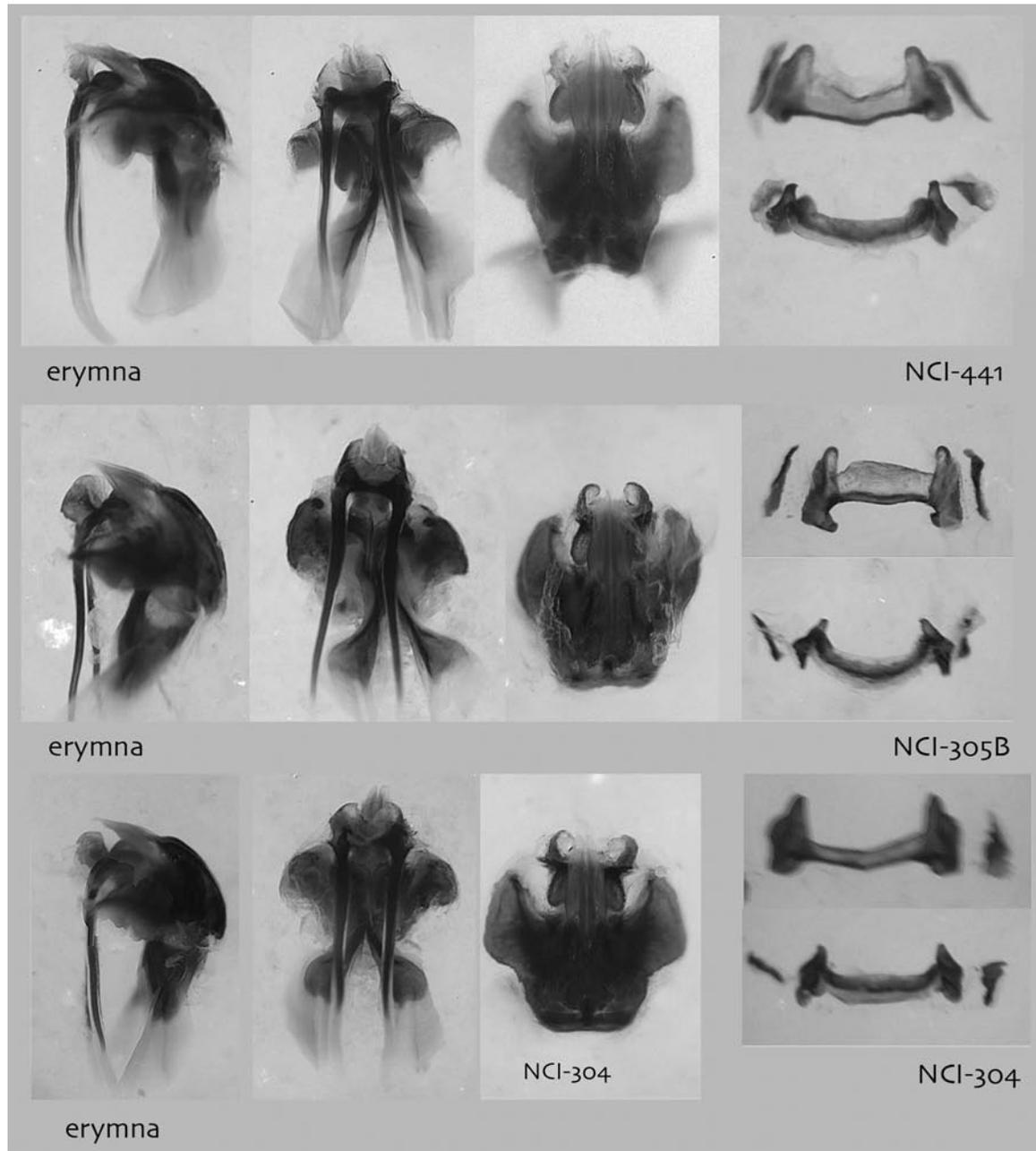


Fig. 32. Comparison of genitalia in *Leatettix*. (Showing lateral dorsal, and ventral view of aedeagus and dorsal and posterior views of epiphallus).

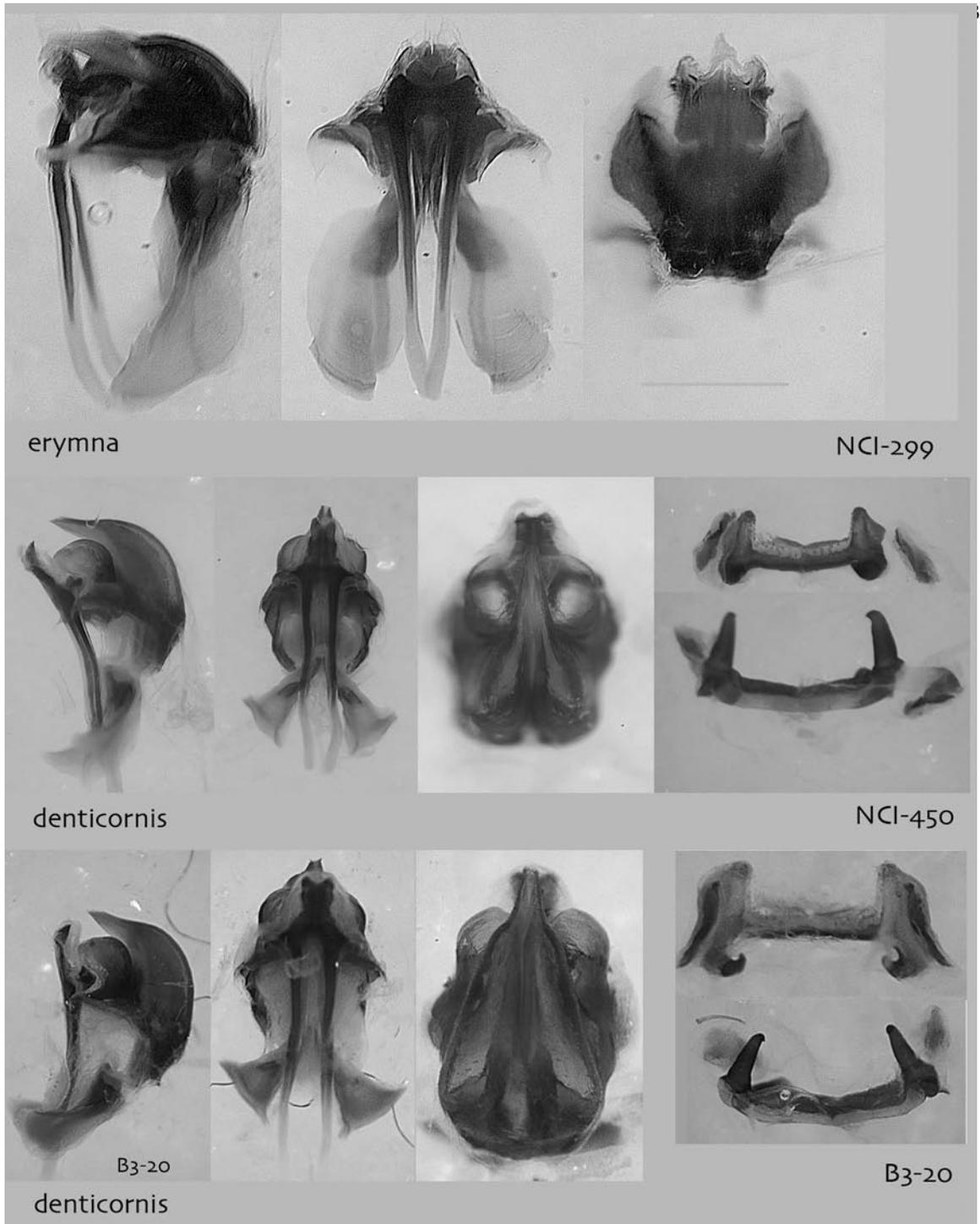


Fig. 33. Comparison of genitalia in *Leatettix*. (Showing lateral dorsal, and ventral view of aedeagus and dorsal and posterior views of epiphallus).



Fig. 34. Portraits of male and female *Leatettix nama*.

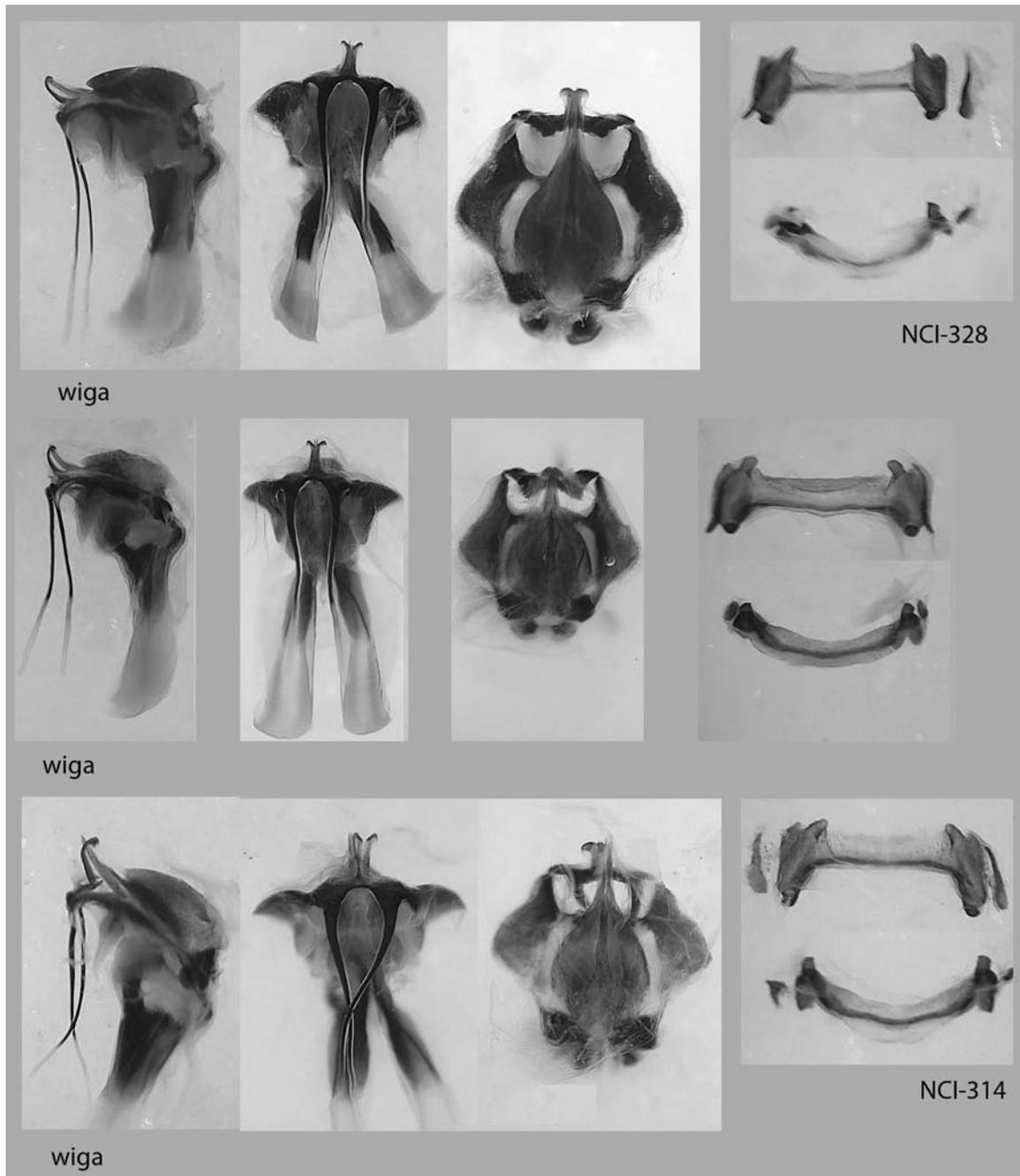


Fig. 35. Comparison of genitalia in *Leatettix*. (Showing lateral dorsal, and ventral view of aedeagus and dorsal and posterior views of epiphallus).

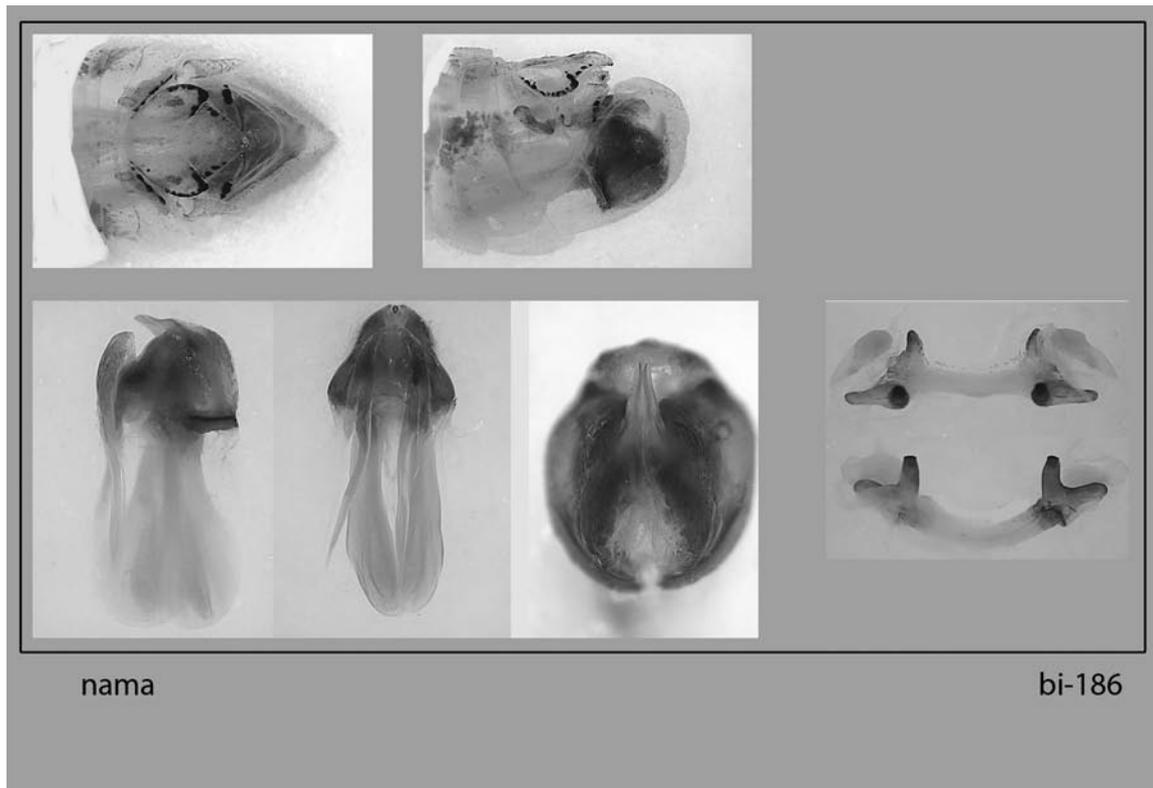


Fig. 36. Comparison of genitalia in *Leatettix nama*. (Showing lateral dorsal, and ventral view of aedeagus and dorsal and posterior views of epiphallus, and dorsal and lateral view of end of abdomen).

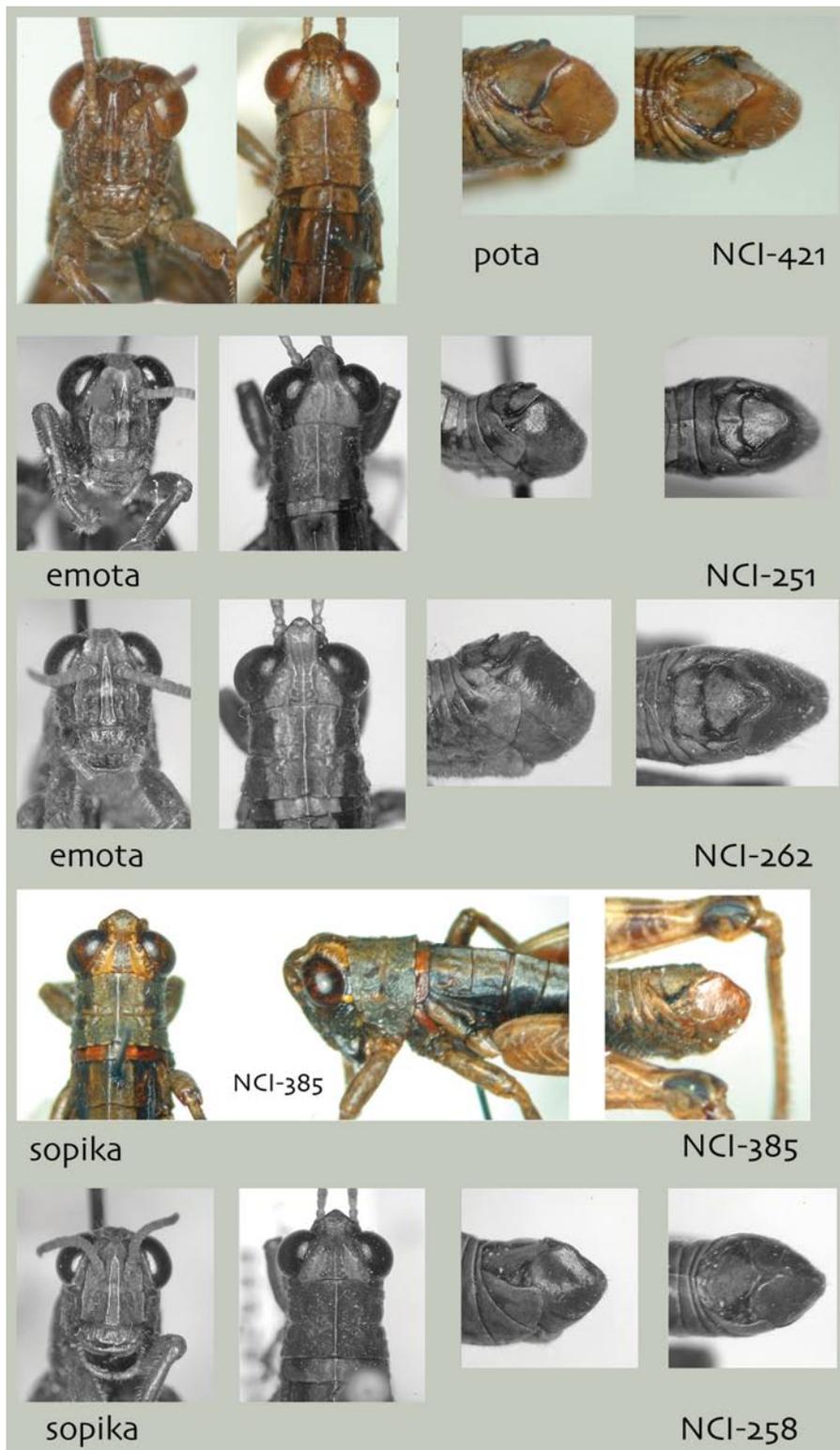


Fig. 37. Comparison of head, thorax and end of abdomen in three species of *Leatettix*.

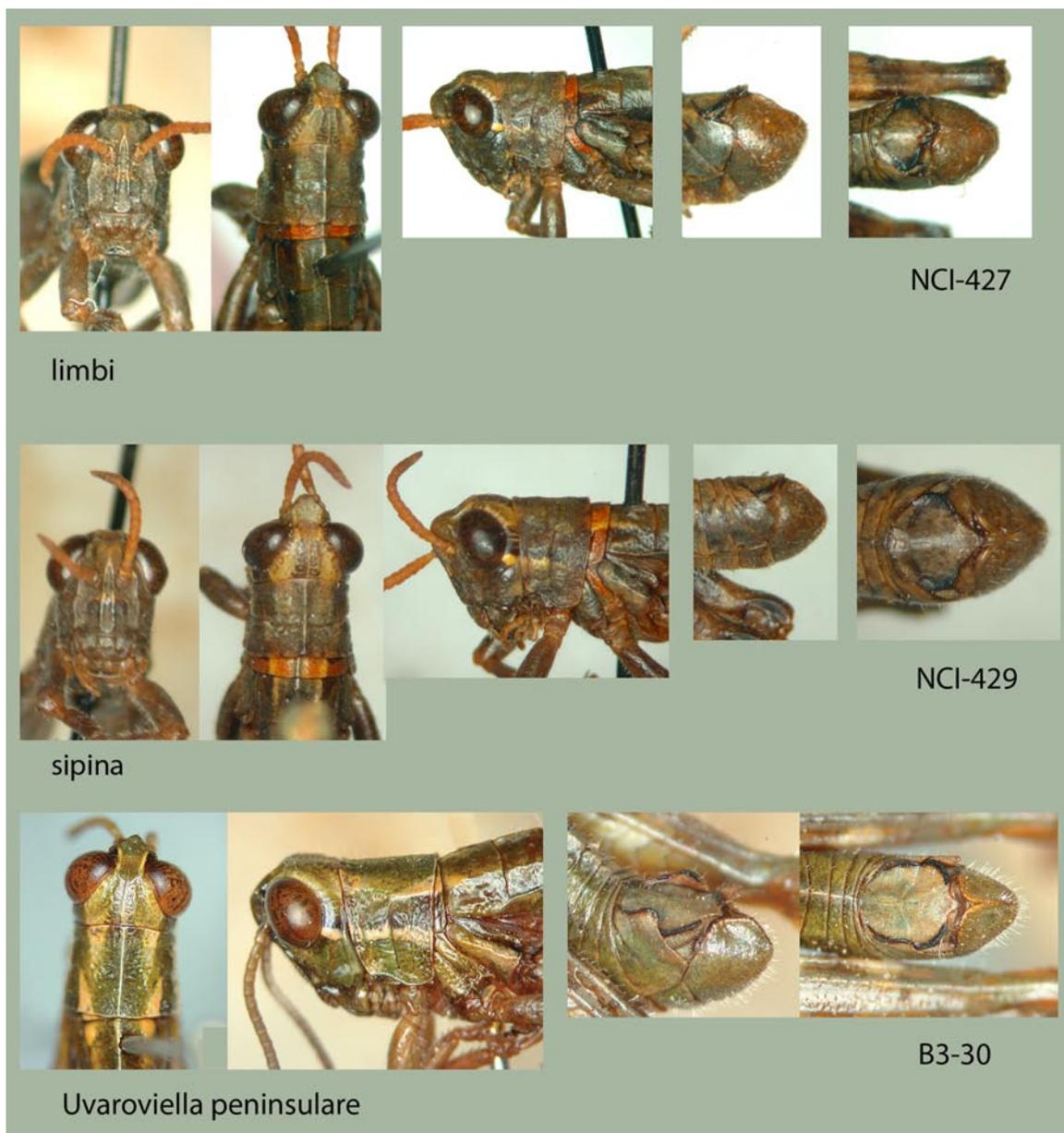


Fig. 38. Comparison of head, thorax and end of abdomen in two species of *Leatettix* and *Uvaroviella peninsulare*.

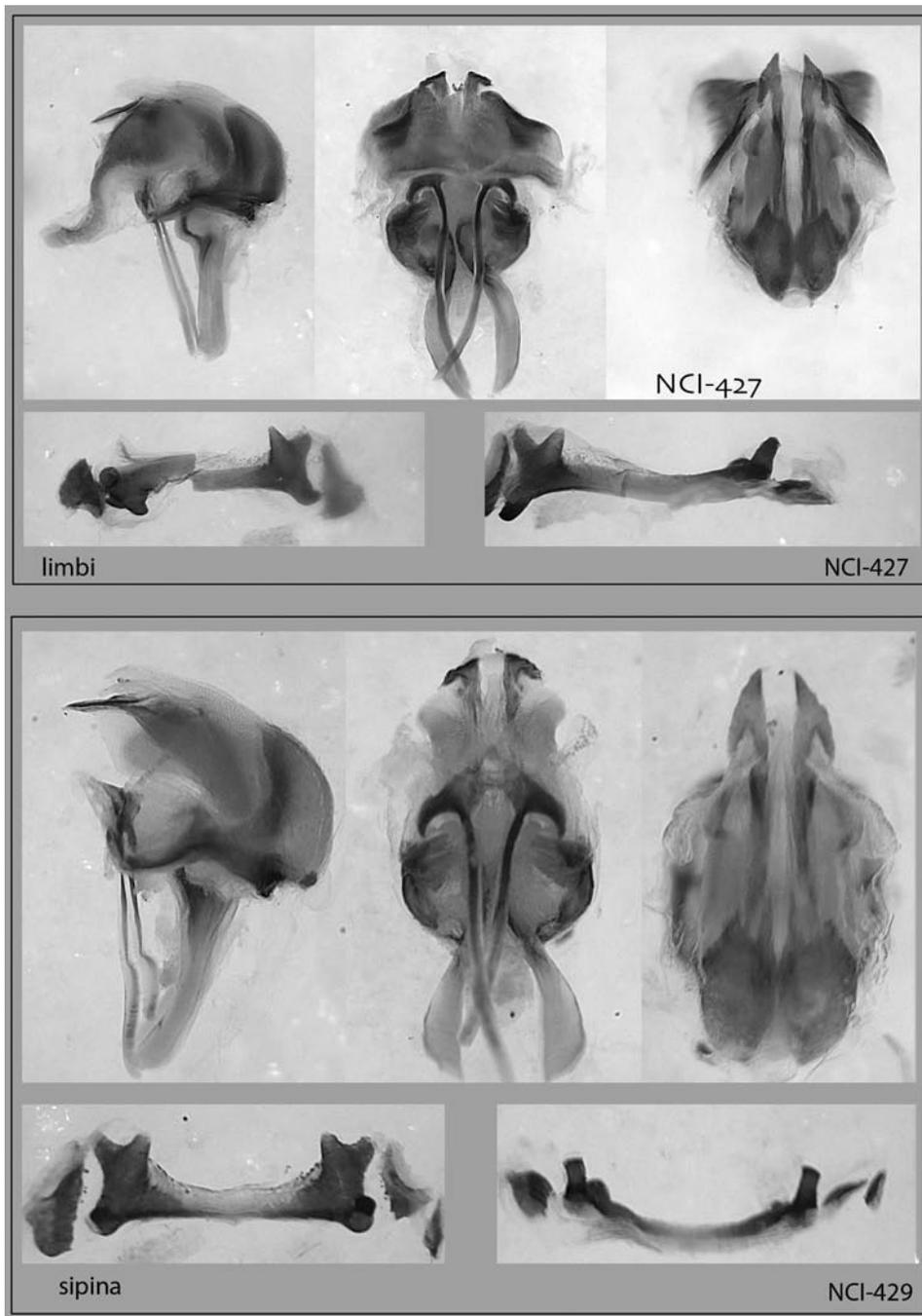


Fig. 39. Comparison of genitalia in *Leatettix*. (Showing lateral dorsal, and ventral view of aedeagus and dorsal and posterior views of epiphallus).

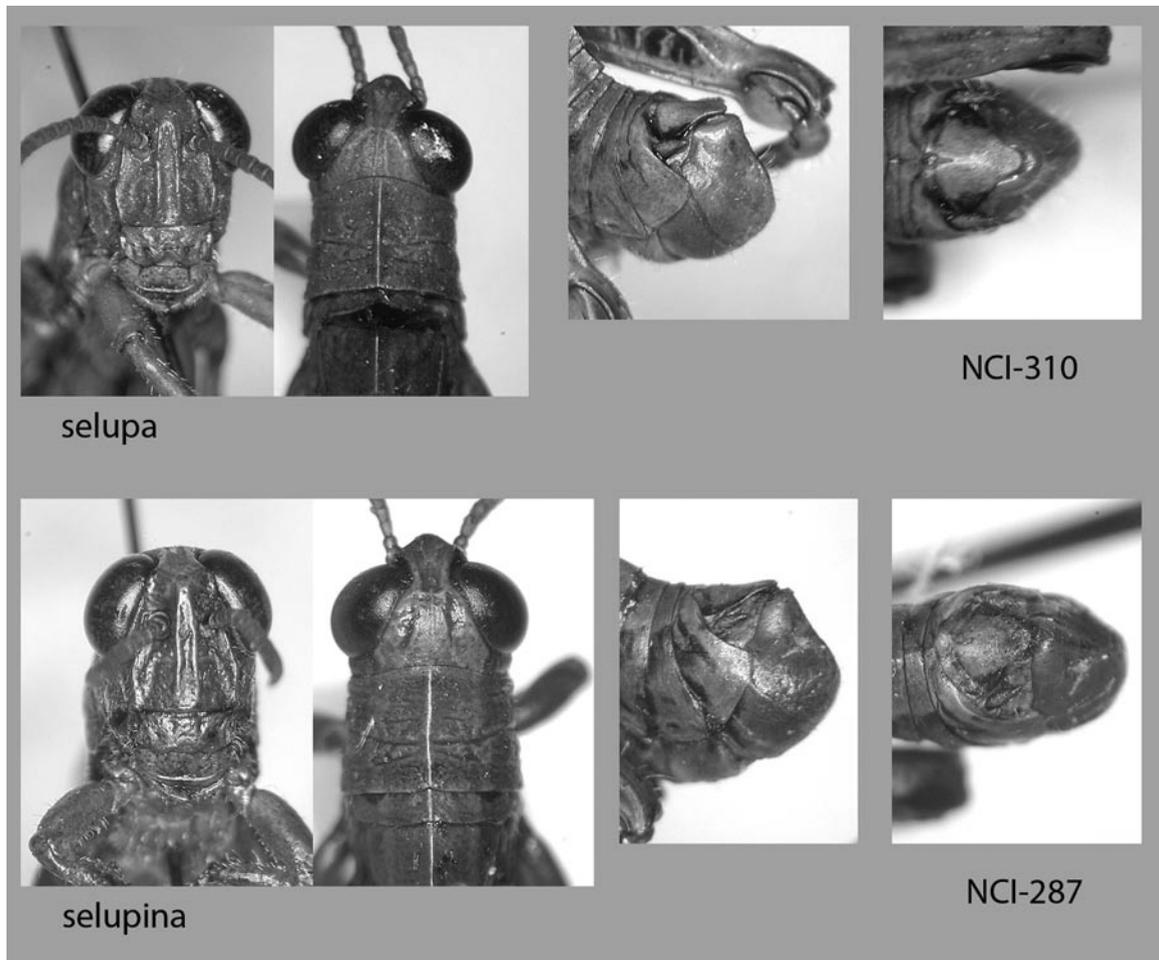


Fig. 40. Comparison of head, thorax and end of abdomen in two species of *Leatettix*.

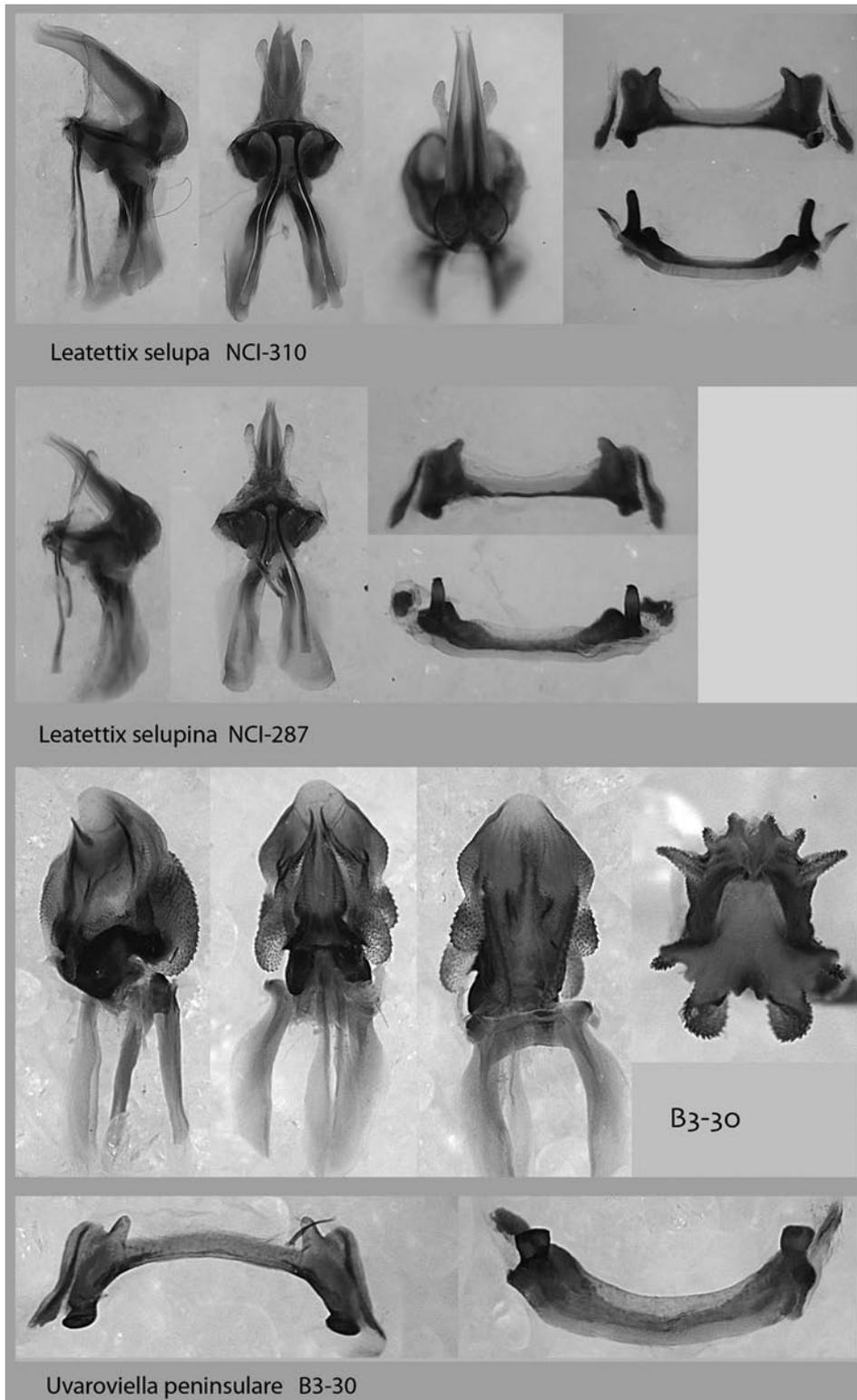


Fig. 41. Comparison of genitalia in *Leatettix* and *Uvaroviella*. (Showing lateral dorsal, and ventral view of aedeagus and dorsal and posterior views of epiphallus).