

Annotated provisional checklist and key to the platypleurine cicadas (Homoptera: Cicadidae) of coastal Natal

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The geographical distributions, habitat preferences, plant associations and seasonal appearance of the platypleurine cicadas occurring on the Natal coastal plain, South Africa, are reported for the first time, and a key to the species is provided.

Die geografiese verspreiding, habitatvoorkeur, plantassosiasies en seisoenlike voorkoms van die *Platypleura*-sonbesies wat op die Natalse strandvlakte van Suid-Afrika voorkom, word vir die eerste keer beskryf, en 'n sleutel vir die spesies word voorsien.

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The platypleurine cicadas are a group of large, attractively patterned, tree-dwelling bugs which make their presence obvious by their loud calling songs. Practically nothing is known of the biology of the southern African cicadas, although many are amongst the largest and noisiest insects in the region. A survey of the platypleurine fauna of coastal Natal was undertaken as part of an investigation into the communication systems of these insects. Information about the host plants and habitat preferences of the species were gathered from field notes made at several localities along the coastal plain. Additional locality records were obtained from the Transvaal Museum, Pretoria, Durban Museum, Durban, South African Museum, Cape Town, and the National Collection of Insects, Pretoria.

The calling songs of each of these species, except *Pycna natalensis*, have been reported by Villet (1988, 1989).

Results

Annotated provisional checklist

Kongota punctigera (Walker)

Distribution: Kosi Bay to Port Edward (Figure 1a); widespread.

Habitat: restricted to coastal forests.

Host plants: *Apodytes dimidiata*, *Dalbergia armata*, *Eugenia capensis*, *Mimusops caffra* and others.

Seasonal activity: February to May (Figure 3), unusually late in the summer for a platypleurine.

Comments: The female of this species is polymorphic, an unusual trait in cicadas. The species is reasonably common.

Azanicada zuluensis (Villet)

Distribution: The only known localities to date are around Mtunzini (Villet 1987).

Habitat: coastal dune forest.

Host plants: specific to *Maytenus procumbens*, which

grows along the Natal coast (Coates Palgrave 1977). Seasonal activity: mid-December to late April (Figure 3).

Comments: fairly common on its hosts at the type locality; the wing and body markings are rather variable.

Platypleura maytenophila Villet

Distribution: widespread in coastal Zululand (Villet 1987), and recently also found in Vernon Crookes Nature Reserve on south coast.

Habitat: coastal forest to bushveld in areas where its host plant grows.

Host plants: *Maytenus heterophylla*.

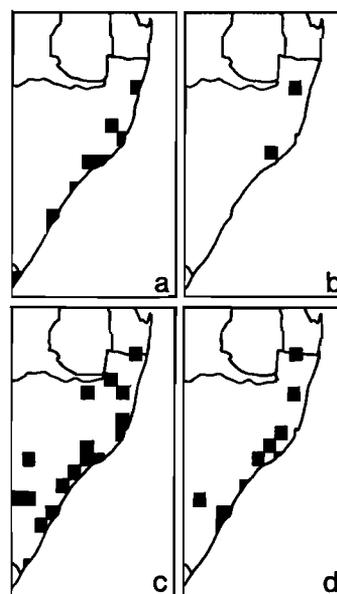


Figure 1 Distributions of (a) *Kongota punctigera* (b) *Platypleura hirtipennis* (c) *Platypleura divisa* and (d) *Platypleura haglundii* in Natal.

Seasonal activity: throughout summer (Figure 3).

Comments: common in suitable habitats; aggregates on its host plant.

Platyleura hirtipennis (Germar)

Distribution: essentially an inland species, it does enter the coastal plateau (Figure 1b), and is sympatric with *P. maytenophila* in some areas e.g. west of Empangeni.

Habitat: open to fairly dense bushveld.

Host plants: *Maytenus longispina* and *M. heterophylla*.

Seasonal activity: late November to late February.

Comments: moderately common; closely related to *P. maytenophila*. Males form choruses on the host plants. Platyleurine nymphs which were reported feeding on the roots of sugar cane in Swaziland (Carnegie pers. comm.) have been provisionally identified as belonging to this species.

Platyleura divisa (Germar)

Distribution: widespread (Figure 1c).

Habitat: along thickly wooded drainage channels, streams and rivers.

Host plants: *Barringtonia racemosa*, *Ekebergia capensis*, *Ficus trichopoda*, *Harpephyllum caffrum*, *Hibiscus tiliaceus*, vines and other trees.

Seasonal activity: from midsummer to autumn.

Comments: specimens are usually found in scattered patches, often on one tree.

Platyleura argentata Villet

Distribution: Sordwana Bay to Port Edward (Villet 1987); localized.

Habitat: Milkwood forests along the coast (Villet 1987).

Host plants: *Mimusops caffra* (milkwood trees).

Seasonal activity: active until late in the season (Figure 3).

Comments: moderately uncommon; individuals found in small patches; found on trunks of mature trees only.

Platyleura haglundii Stal

Distribution: widespread in suitable habitats (Figure 1d).

Habitat: *Acacia* bushveld.

Host plants: various indigenous *Acacia* species, *Delonix regia* (flamboyant).

Seasonal activity: late November to March; earlier in Zimbabwe.

Comments: common; shows marked geographic variation in colouration and wing pattern. Specimens from Zululand are greenish and mottled; those from the Natal midland usually browner and mottled; Zimbabwean specimens are darker and more uniformly brown; western Transvaal specimens are sometimes almost black.

Munza parva Villet

Distribution: the only locality records available are those of the type series: Mkuzi and Delagoa Bay, which

suggests that this species may at least be found in northern Zululand and neighbouring Mozambique.

Habitat: holotype captured in *Strychnos* savanna.

Host plants: unknown. Holotype caught on *Lippia javanica*.

Seasonal activity: unknown.

Brevisana brevis Walker

Distribution: the taxonomy of this genus is in need of attention, which complicates an assessment of this species's range. The illustrated distribution (Figure 2a) is therefore very conservative.

Habitat: *Acacia* bushveld.

Host plants: *Acacia* spp.

Seasonal activity: December to April.

Comments: common but scattered. The sexes are dimorphic, the males possessing a white band across the base of the abdomen which is lacking in the

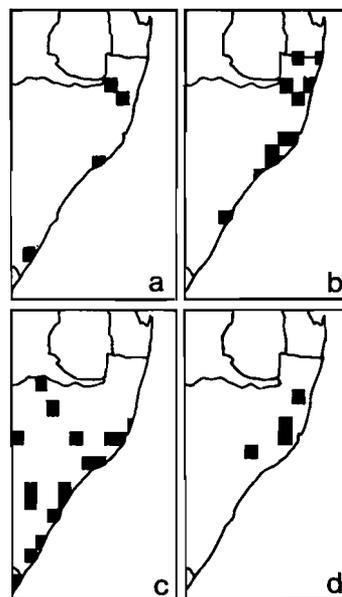


Figure 2 Distributions of (a) *Brevisana brevis* (b) *Oxypleura lenihani* (c) *Pycna semiclara* and (d) *Pycna natalensis* in Natal.

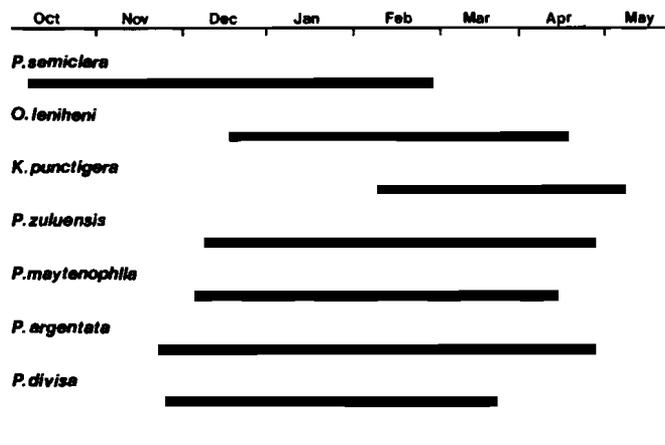


Figure 3 Months during which adult cicadas were heard calling at Mtunzini (28°58'S / 31°46'E), Natal.

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females. May aggregate to form choruses on host plants.

Oxypleura lenihani Boulard

Distribution: Natal coastal region from Durban to Mozambique (Figure 2b).

Habitat: specimens were encountered in open *Strychnos* woodland at Mkuzi, Zululand, and in bushveld and open parts of the coastal secondary forest and the seaward margin of coastal milkwood forest at Mtunzini. It does not enter forest where the canopy is closed, and seems to be absent from *Acacia* bushveld around Mkuzi.

Host plants: *Albizia adianthifolia*, *Albizia forbesii*, *Albizia petersiana*, *Antidesma venosum*, *Apodytes dimidiata*, *Bridelia micrantha*, *Carissa bispinosa*, *Euclea natalensis*, *Ficus natalensis*, *Ficus sur*, *Ficus trichopoda*, *Haleria lucida*, *Harpephyllum caffrum*, *Ocotea bullata*, *Olea woodiana*, *Rothmannia globosa*, *Schotia brachypetala*, *Strychnos spinosa*, *Strychnos madagascariensis*, *Syzygium cordatum*, and others. Shows a slight bias towards wild fig trees in Mkuze Game Reserve, and *Strychnos decussata* at Mtunzini.

Seasonal activity: mid-December to mid-April (Figure 3).

Comments: often common and gregarious.

Pycna semiclara (Germar)

Distribution: widespread (Figure 2c).

Habitat: forests where the undergrowth rarely grows taller than 1,2 m, and the trees are at least 10 m in height, and also large stands of oak, pine, gum and cottonwood with closed canopies. A few specimens have been found in dense riverine bush, but this is very unusual.

Host plants: *Albizia adianthifolia*, *Antidesma venosum*, *Barringtonia racemosa*, *Cussonia sphaerocephala*, *Euclea natalensis*, *Ficus natalensis*, *Hibiscus tiliaceus*, *Macaranga capensis*, *Mimusops caffra*, *Milletia grandis*, *Ocotea bullata*, *Olea woodiana*, *Strychnos spinosa*, *Syzygium cordatum*, *Voacanga thouarsii*, and others.

Seasonal activity: one of the first species to emerge each season (Figure 3).

Comments: common and highly gregarious. Choruses may contain up to twenty individuals.

Pycna natalensis Distant

Distribution: Zululand, at least as far south as Empangeni (Figure 2d).

Habitat: Open or closed mixed woodland, possibly characterized by *Spirostachys africana* (tambotie).

Host plants: *Balanites maughami*, *Erythrina lysistemon* and other unidentified trees.

Seasonal activity: November to January.

Comments: reported as emerging beneath citrus trees in orchards in northern Swaziland. The few specimens in collections were collected mainly in December.

Key to species in the checklist

1. Wings entirely clear 2.
- Wings patterned 3.
2. Paranotal lobes acute; large species (tegmen length 33–40 mm) *Oxypleura lenihani*
- Paranotal lobes rounded; medium-sized species (tegmen length 27–31 mm) *Brevisana brevis*
3. Hind wings at least partially marked with orange ... 4.
- Hind wings without orange markings 10.
4. Limbus of hind wing wide; no white patch at ends of anal veins *Munza parva*
- Limbos narrow; white patch at ends of anal veins 5.
5. Crossveins of hind wing blackened 6.
- Crossveins of hind wing not blackened 7.
6. Body brownish; markings on hind wing well developed *Platypleura hirtipennis*
- Body green; markings on hind wing weakly developed *Platypleura maytenophilla*
7. Small species (19–27 mm); prothoracic markings usually well defined 8.
- Medium-to-large species (28–36 mm); prothoracic markings often vague 9.
8. Costal margin of forewing gently curved, wingspan 25–28 mm *Azanicada zuleunsi*
- Costal margin of forewing strongly curved; wingspan 19–23 mm; white circumcaudal band entire *Platypleura haglundii*
9. Opercula overlapping; white circumcaudal band divided *Platypleura divisa*
- Opercula not overlapping; forewings silvery in appearance; circumcaudal band entire *Platypleura argentata*
10. Costal margin of forewing tapers evenly from base; large species 11.
- Costal margin strongly dilated at base; medium-sized species *Kongota punctigera*
11. Frons indented above clypeus *Pycna semiclara*
- Frons not deeply indented above clypeus *Pycna natalensis*

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