

A New Species of *Apocathema* Emeljanov, 2016 (Hemiptera, Fulgoroidea: Kinnaridae) from Coastal Central Chile¹

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Abstract—*Apocathema zapallarensis* sp. n. is described from a hygrophilous forest in coastal central Chile, being the second species of its genus. It differs from *Apocathema lukashevitchae* Emeljanov, 2016 by the more basally positioned, shorter, and cranially concave lobes of the styli and unforked apex of the ventral process of the penis.

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Apocathema Emeljanov, 2016 is the southernmost genus of Kinnaridae from South America and the only representative of the tribe Prosotropini. It previously included only one Chilean species from La Campana National Park (Valparaíso Region) collected on *Chusquea* (Poaceae: Bambusoideae) (Emeljanov, 2017). The purpose of this contribution is to describe the second Chilean species of this genus.

MATERIALS AND METHODS

Morphological terminology in this paper is mostly the same as that used in Emeljanov (2016). Genitalia were cleared in a saturated KOH solution at room temperature for 24 hours and stored in glycerin in microvials pinned below respective specimens. Photographs were taken with a digital camera adapted to stereoscopic (Figs. 1–4) and light (Figs. 6–17) microscopes.

Type material including the holotype is deposited in Museo Nacional de Historia Natural, Santiago, Chile (MNNC) and Zoological Institute, Russian Academy of Sciences, St. Petersburg (ZIN).

RESULTS

Apocathema zapallarensis Campodonico et Emeljanov, sp. n. (Figs. 1–11, 13–17)

Material. Holotype: ♂, Chile [Valparaíso reg.], *Pentacalia* Prov., Zapallar, Quebrada el Tigre, 32°33'S,

71°25'W, 250–400 m, 16.I.2016 (J.F. Campodonico) (MNNC). Paratypes: same data as holotype, 1 ♀ (MNNC), 1 ♀ (ZIN).

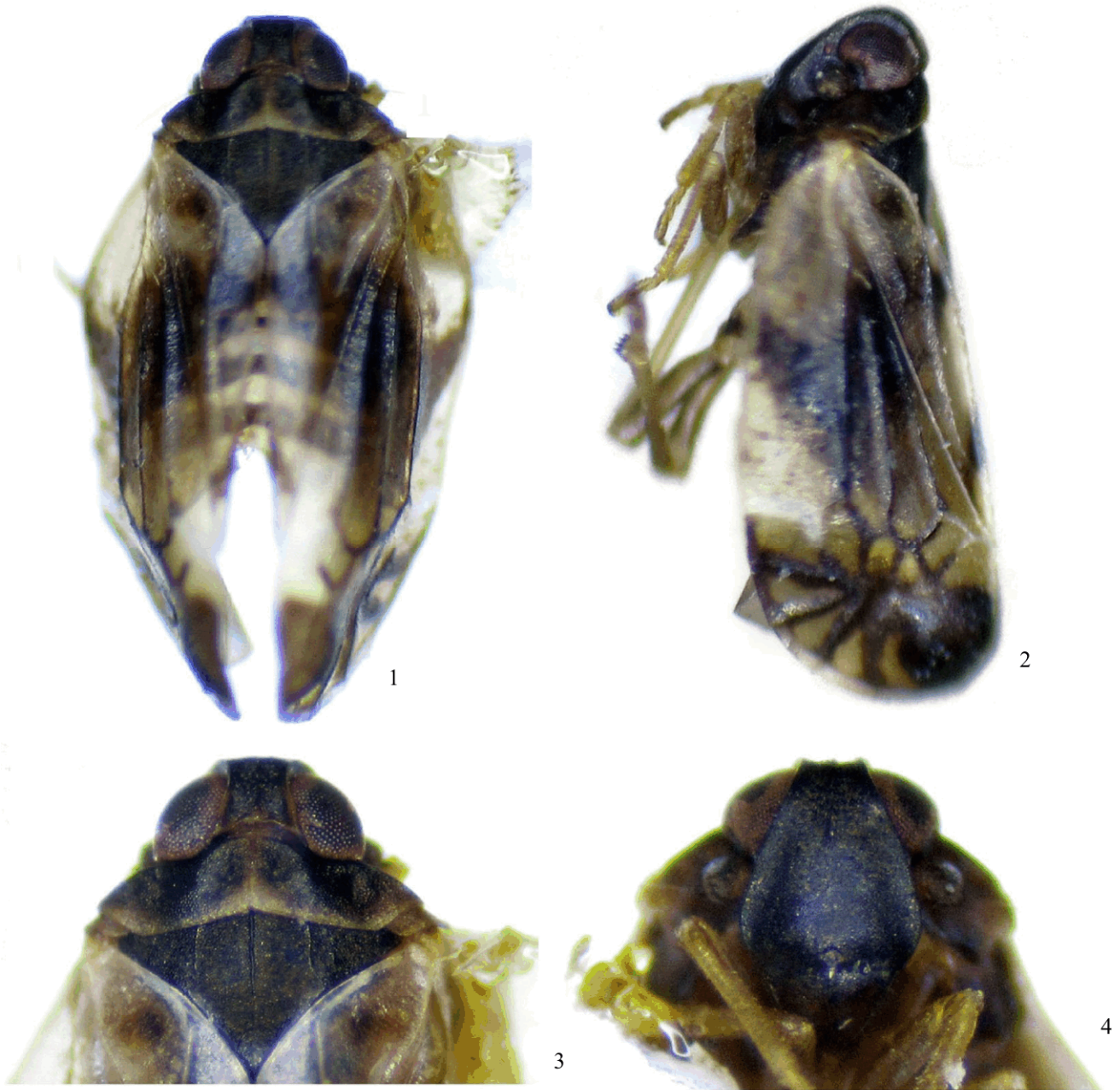
Description. Length excluding wings: 1.8 mm male; 1.8 mm female. Length including wings: 2.4 mm male; 2.4 mm female. Width at level of tegulae: 0.8 mm male; 0.8 mm female. Coloration. Head, thorax, sclerites of abdomen and most of coxae black; most of femora dark brown; tibiae, posterior margin of pronotum, tegulae and rostrum light brown.

Head (Figs. 1–4). Shagreened. Macroscrope (Figs. 1, 3) with median length about 3/4 width between posterior angles; posterior margin concave; median carina conspicuous. Eumetope (Fig. 4) with median carina fading ventrally.

Thorax (Figs. 1–3). Pronotum (Figs. 1, 3) shagreened; median carina of disc distinct; lateral carinae of disc distinct in male and females, not sharp, caudally fading and slightly curving laterad. Mesonotum (Figs. 1, 3) with median and lateral carinae of disc fading caudally; scutellum rugose.

Wings (Figs. 1, 2, 5). Forewings (Figs. 1, 2, 5) with insular cell quadrangular, anteriorly closed, connected with stem of *M* by crossvein *m-cu*; veins hyaline at basal cell, stem of *ScRM* and most of clavus, then brown with the exception of *Sc*. Crossvein between clavus and insular cell and part of adjacent veins white; disc mostly hyaline with brownish tonality; dark brown spot present between anal veins; broad dark brown band present at middle before nodal line,

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Figs. 1–4. *Apocathema zapallarensis* sp. n., male: (1) habitus, dorsal view; (2) habitus, left lateral view; (3) anterior part of body, dorsal view; (4) anterior part of body, ventrocranial view.

medially broader and narrowed on tips that reach costal and sutural margins; a dark brown spot present at apex of stem of anal veins; concolorous areas adjacent to veins distad to nodal line; a dark broad macula over the cell enclosed by the fork of *CuA1*.

Male genitalia (Figs. 6–11). Pygofer (Figs. 6, 7) in dorsal half compressed laterally, with posterior margins broadly concave. Anal tube (Figs. 7, 8) notched at apex, with a pair of ventrobasal processes directed caudad and curved dorsad until apex, which is curved

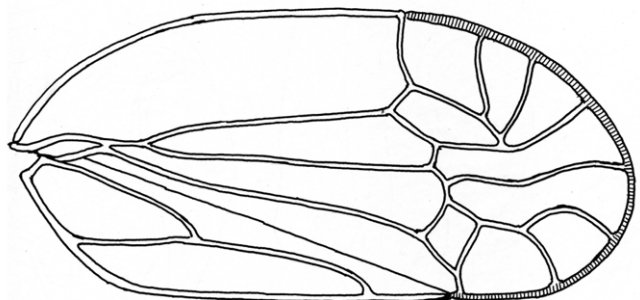
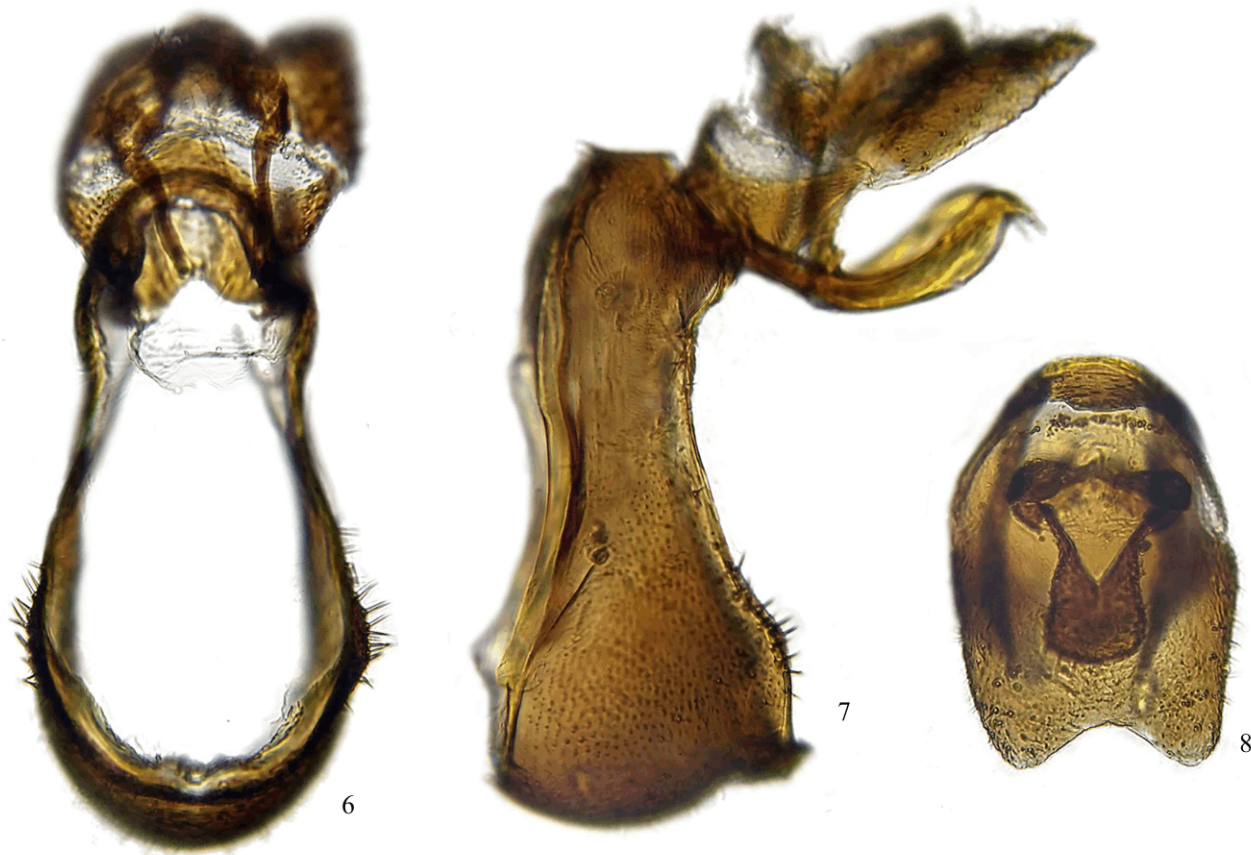
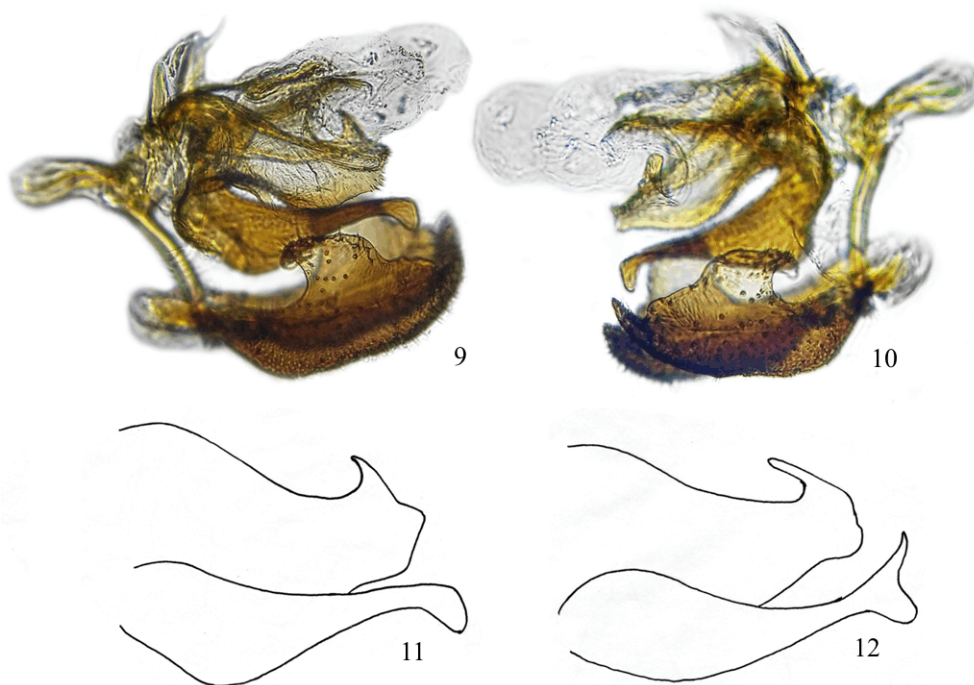


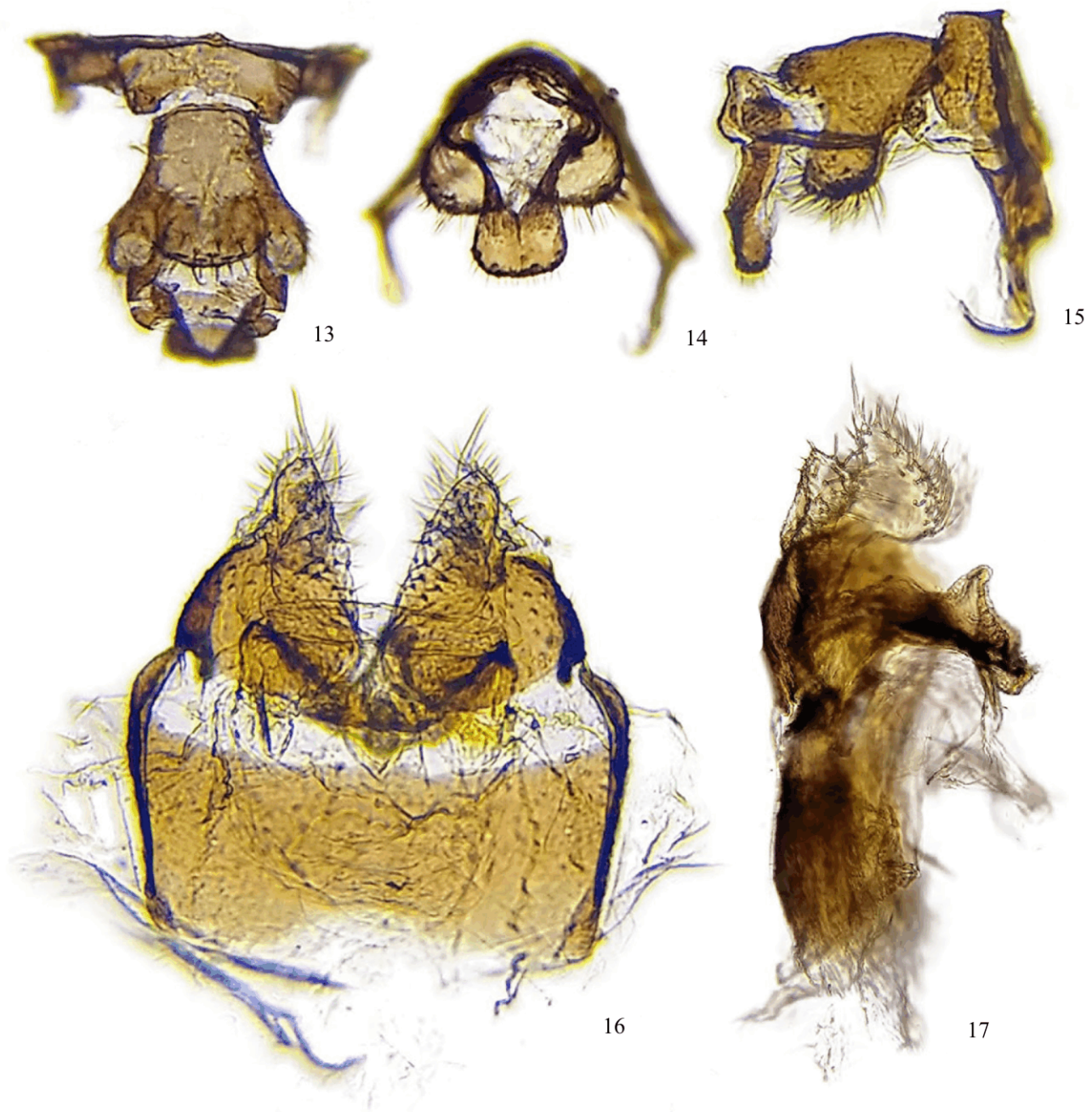
Fig. 5. *Apocathema zapallarensis* sp. n., fore wing of female.



Figs. 6–8. *Apocathema zapallarensis* sp. n., male genitalia: (6, 7) pygofer and postgenital segments, caudal and left lateral view; (8) postgenital segments, dorsal view.



Figs. 9–12. (9–11) *Apocathema zapallarensis* sp. n. [(9, 10) genital complex, left lateral (9) and right lateral (10) view; (11) outlines of penis processes as in Fig. 9]; (12) *Apocathema lukashevitchae* Em., outlines of penis processes (positioned as in Fig. 9).



Figs. 13–17. *Apocathema zapallarensis* sp. n., female genitalia: (13–15) tergite IX and postgenital segments, dorsal, caudal and right lateral view; (16, 17) sternite VII to ovipositor, ventral and right lateral view.

ventrad. Styli (Figs. 9, 10) on dorsal side with a lobe caudad to basal third; lobe cranially concave, with caudal angle curved outwards, then narrowed; apex with a tooth directed caudodorsad. Penis (Figs. 9, 10) asymmetrical; sclerotization (besides ventral process) with a part basally at left side broad, inclined ventrad, with apex truncate and denticulate, and with an antero-caudal projection reaching the right side; sclerotization

also projected at right laterodorsal and dorsal sides; apex of penis broad and not sclerotized; ventral process in basal half broad and ventrally convex, then narrowed until apex which is truncate and abruptly broadened ventrally.

Female genitalia (Figs. 13–17). Tergite IX (Figs. 13–15) short. Anal tube (Figs. 13–15) laterally and ventrally broadened at apex, in dorsal view subtri-

angular. Sternite VII (Figs. 16, 17) slightly widening distally. Gonocoxae VIII (Figs. 16, 17) with ventral side of apex slightly directed laterad; a broad lateral lobe apically angled and with dorsal margin inclined ventrad.

Etymology. The species name refers to Zapallar, the type locality.

Comparative notes. *Apocathema zapallarensis* sp. n. can be easily separated from the other species of the genus, *A. lukashevitchae* Emeljanov, 2016 (Fig. 12), by the more basally positioned, shorter lobes of styli with concave cranial margin; the unforked at the apex, but ventrally broadened, ventral process of the penis. Also, in all the specimens of *A. zapallarensis* a cross-vein is present between *M* and insular cell (the insular cell contacting with the median stem was described for *A. lukashevitchae* and there considered a characteristic feature of the genus). Additionally, habitats are rather different: *A. zapallarensis* was collected in a hygrophilous forest with relict Valdivian elements on the coast between 250 and 400 m a.s.l. (Pérez and Villagrán, 1985); while *A. lukashevitchae* was collected on high coastal cordillera at 1100 m a.s.l. (Emeljanov, 2016).

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