

FIGURE 15. Distribution of Morsei Group species.

***Aglaothorax islandica* (Rentz & Weissman, 1981)**

Neduba (Aglaothorax) morsei islandica—Rentz & Weissman, 1981: 101.

Aglaothorax islandica **stat. rev.** (Revised to species level).

Neduba (Aglaothorax) morsei santacruzae—Rentz & Weissman 1981: 103 **New junior subjective synonym.**

Fig. 15 (distribution), Fig. 21 (male and female habitus, calling song, male and female terminalia, karyotype), Plate 5 (male terminalia), Plate 8 (female subgenital plate), Plate 12 (male titillators), Plate 15 (male calling song).

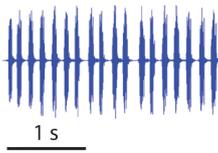
Common name. Northern Channel Islands Shieldback.

History of recognition. Rentz & Weissman (1981) described two California Channel Islands endemics under *Neduba (Aglaothorax): morsei santacruzae* from the University of California Research Station on Santa Cruz Island, and *morsei islandica* from Frenchy's Cove, West Anacapa Island. The disjunct distribution of the latter encompassed the islands immediately to the west and east of Santa Cruz Island. After consulting expanded series, we conclude that a single taxon occurs on the northern Channel Islands, for which genetic distance lends evidence of specific rank. We elevate *A. islandica* to species rank as a more appropriate species epithet and relegate *santacruzae* to a junior subjective synonym of *A. islandica*.

male PARATOPOTYPE
USA. CA: Ventura Co.



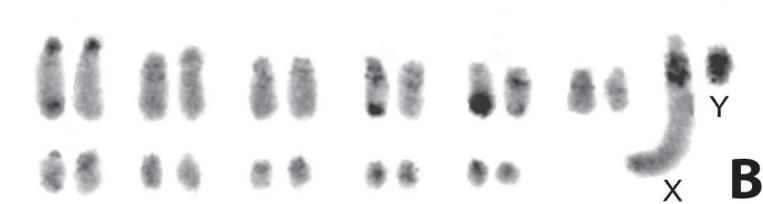
calling song USA. CA: Santa Barbara Co. 21.3°C S18-30 R19-16



karyotype USA. CA: Santa Barbara Co. S82-40 T82-29



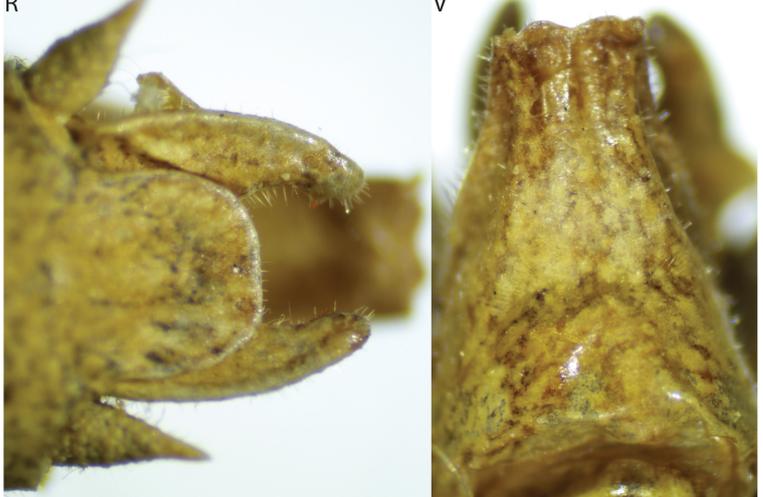
karyotype USA. CA: Santa Barbara Co. S18-30 T19-6



female PARATOPOTYPE
USA. CA: Ventura Co.



male terminalia PARATOPOTYPE USA. CA: Ventura Co. DCR111
R V



female *santacruzae* TOPOTYPE
USA. CA: Santa Barbara Co.



titillator PARATOPOTYPE
USA CA: Ventura Co.



female subgenital plate
PARATOPOTYPE

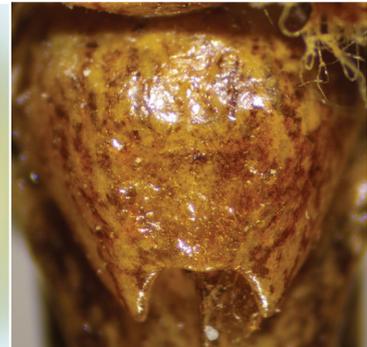


FIGURE 21. *A. islandica* male and female habitus, calling song, male and female terminalia, and karyotype. Idiograms of karyotype $2n\sigma=24$ showing differences in preparation techniques: A. prepared by NU, B. F, prepared by EWS.

Type material. The holotype male of *A. islandica* from West Anacapa Island resides in CAS, type # 12440. Images of the type are available on OSFO (Cigliano *et al.* 2025). PARATYPES: (n=24) USA, CA, Santa Barbara Co., Santa Cruz Island Reserve Field Station, 33.9969, -119.7260, 75 m, 1-VIII-1969, DC Rentz, DB Weissman, CAS, 2♂; same data except 14-VIII-1974, d B Weissman, CAS, 2♀; Santa Rosa Island, 0.5 miles north Black Mountain, 33.950003, -120.100964, 396 m, 9-VIII-1974, d B Weissman, CAS, 2♂, 1♀; Santa Rosa Island, Black Mountain, 33.950003, -120.100964, 396 m, d B Weissman, CAS, 1♀; **Ventura Co.**, West Anacapa Island, Frenchy's Cove, 34.01056, -119.425117, 23-VI-1971, d C Rentz, d B Weissman, CAS, 2♂, 1♀; same data except 24-VI-1971, d C Rentz, d B Weissman, CAS, 1♂; Middle Anacapa Island, 34.004449, -119.393171, 16-VI-1970, d B Weissman, CAS, 2♂, 1♀; same data except 17-VI-1970, d B Weissman, CAS, 4♂; same data except 22-VIII-1974, d B Weissman, CAS, 4♂, 1♀.

Measurements. (mm, ♂n=9, ♀n=8) Hind femur ♂13.59–16.75, ♀15.61–18.54, pronotum total length ♂8.45–9.85, ♀7.55–8.95, prozona length ♂3.66–4.18, ♀3.44–4.85, metazona dorsal length ♂4.70–5.85, ♀3.55–4.85, pronotum constriction width ♂2.72–3.60, ♀3.10–3.75, metazona dorsal width ♂5.79–7.48, ♀5.51–6.58, head width ♂3.80–4.40, ♀4.26–5.75, ovipositor length ♀11.36–12.95.

Distribution. Santa Barbara and Ventura Counties on three of the four northern California Channel Islands: Anacapa, Santa Cruz, and Santa Rosa. The species was never encountered on the windswept, low elevation San Miguel Island (Rentz & Weissman 1981).

Habitat. Coastal bluffs, chaparral, oak woodland, and dry riverbeds (Rentz & Weissman 1981). Several males were singing above 3 m in planted live oaks around the field station on Santa Cruz Island (S18-30).

Seasonal occurrence. Long adult season from spring through summer from 19-III-1982 (CW Melten, CAS) to 22-VIII-1974 (DB Weissman, CAS).

Stridulatory file. (n=6) length 3.50–3.75 mm, 89–100 teeth, tooth density 26.3±1.3 (24.1–27.7) teeth/mm.

Song. (n=3) Common song type of small *Aglaothorax* with slow series of pulse trains that may be counted by a human listener. Series of pulse trains 90±40 ms in length are produced at a rate of 6.55±0.75 s⁻¹. Mean peak frequency is 12.63±1.80 kHz. Echemes consist of 15±4 pulse trains (range 10–18). Echemes repeat at a rate of 6.6 min⁻¹.

Karyotype. (n=3) 2n♂=24 (22t+Xty t), T82-29 (S82-40), T19-6 (S18-30), both specimens from Santa Cruz Island Field Station Area.

Recognition. Male morphology, geography. This is the only *Aglaothorax* species found on the California Channel Islands. The male paraproct projections are about twice as long as wide and bear a well-developed mesal tooth that is located considerably far basad from the apex. This condition is shared by *A. hulodomus* and a few populations of *A. nesiazio*. The male supra-anal plate is flat and rounded or square with rounded caudal edges, similar to that of *A. morsei*. The male titillator arms are long for the Morsei Group and distinctly curved; the similar *A. hulodomus* and *A. nesiazio* have nearly straight titillator arms. The female subgenital plate has short triangular lateral processes as opposed to the long lateral processes of most Diminutiva Group species.

Notes. Populations on the Channel Islands are large, and considerable series were collected at oatmeal trails by DBW up Canyon de Islay on Santa Cruz Island in 2004 (S04-64, 10-VII-2004). At an identical oatmeal trail laid on 12-VII-2018 (S18-30), only five adult females and no adult males were collected. The five field-collected adult females of *A. islandica* (from S18-30, Santa Cruz Island) were housed together from 21-VII-2018 to 7-VIII-2018, as described on p. 6, when eggs were removed and kept at room temperature, in moist sand, until 29-X-2018. Eggs were then kept at 3°C until 15-III-2019, when they were returned to room temperature. First hatching occurred 4-IV-2019 with first adults appearing 22-VI-2019. Hatching success was limited and we suspect that a 4.5-month chill period is probably not necessary since such low temperatures are rarely seen on Santa Cruz Island.

The northern California Channel Islands are an archipelago of near-shore fringing islands that, while connected to each other during the last glacial maximum, lack any evidence of a land bridge connecting them to the mainland (Salerno *et al.* 2023). Consistent with long-term geographic isolation, *A. islandica* is a basal member of the Morsei Group (Figs. 2–4), which is a clade of Transverse Range and Peninsular Range *Aglaothorax*. The only other nedubine katydid that occurs on the California Channel Islands is *Neduba propsti* (Rentz & Weissman 1981) on Santa Catalina Island (Cole *et al.* 2021; Rentz & Weissman 1981), an island that is not geologically related to the northern Channel Islands (Legg *et al.* 2004) and has also never been connected to mainland California. Reflecting long-term isolation, genetic resolution was strong (Figs. 2, 4) although two haplotypes rendered *A. islandica* polyphyletic with mtDNA (Fig. 3).

Material examined. (n=67) **All USA, CA, Santa Barbara Co.**, Santa Cruz Island, Canyon de Islay, 33.99588, -119.73811, 79-244 m, 12-VII-2018, d W & d B Weissman, CAS, 3♂, 6♀; same data except 10-VII-2004, d B Weissman, CAS, 18♂, 38♀; Santa Cruz Island Reserve Field Station, 33.9969, -119.7260, 75 m, 19-III-1982, CW Melten, CAS, 1♂; Santa Rosa Island, Black Mountain, 33.950003, -120.100964, 396 m, d B Weissman, CAS, 1♂.