

Alarimella anae resembles illustrations of *Graciliala decemlirata* (Conrad, 1858) of Maastrichtian age from the Ripley and Owl Creek Formations of the Gulf Coast (Sohl, 1960, pl. 11, fig. 5, 11). Young specimens of *A. anae* before the growth of the wing could easily be mistaken for immature *G. decemlirata*, which according to Sohl (1960) is not typical of *Graciliala* in that the anterior border of the outer lip is not digitate. Sohl had no specimens of this species with the wing preserved and could not find Conrad's holotype, but Conrad's illustration (1858, pl. 35, fig. 11) shows a wing slightly taller but similar to that of *A. anae* and, as in *A. anae*, the anterior edge of the outer lip lacked the digitations typical of *Graciliala calcaris* (Wade, 1926) and other species of *Graciliala*.

Alarimella anae differs from *Anchura (H.) tricosia* Saul and Popenoe, 1993, which has a somewhat similar posterior spike, in having fine spiral striae rather than about 5 spiral cords on the spire whorls, fewer axial ribs, and a less angulate whorl profile. The wing of *Alarimella anae* is much shorter, less curved, and is without secondary spurs on the shank. On the ultimate whorl of *A. anae*, the axial sculpture is nearly effaced, and an axial bulge is present on the abapertural side of the apertural face.

Etymology: The specific epithet, *anae*, refers to the name of the Santa Ana Mountains, California.

ACKNOWLEDGEMENTS

I am very grateful to John Taylor, Department of Zoology, The Natural History Museum, for a photocopy of Tate (1865). Without it the type species for *Arrhoges* and *Perissoptera* could not be confirmed. Lindsey Groves, Natural History Museum of Los Angeles County, was extremely helpful in finding several other elusive publications. Marc Florence, Smithsonian Institution, and Elana Benamy, Academy of Natural Sciences of Philadelphia, responded expeditiously to specimen number questions. I thank the reviewers Richard Squires and William Elder and the editor José H. Leal for helping to make this paper much more readable.

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LOCALITIES CITED

CIT and UCLA localities have been given LACMIP numbers. The CIT and UCLA numbers for Redding area and Santa Ana Mountains localities are included here because they have been plotted on published maps. Most of the CIT and UCLA localities of Turonian age in the Redding area were plotted on Jones et al. (1978: fig. 5). Most of the CIT localities of the northern Santa Ana Mountains were plotted on Popenoe (1942: fig. 2); these and UCLA localities were plotted on Saul and Bottjer (1982: maps 1-3).

- 80 CIT = LACMIP 8194: In sandstone above cgl., at fork of Silverado and Ladd Canyons on N side of Silverado Canyon, [NW 1/4, SW 1/4 sec.8, T5S, R7W, El Toro quad.], Santa Ana Mts., Orange County, California. Coll: B. N. Moore, 1926. Ladd Formation, Baker Canyon Sandstone. Turonian.
- 82 CIT = LACMIP 8195: Limey sandstone bed near base of shale, S of roadcut at Holz's Ranch (locality may become obscured by slides), Silverado Canyon [E edge SE 1/4, SE 1/4, sec.7, T5S, R7W, El Toro quad.], Santa Ana Mts., Orange County, California. Coll: B. N. Moore, 1927. Ladd Formation, Holz-Baker transition. Turonian.
- 99 CIT = LACMIP 8180: Concretions in shale just above sandstone on south side of Silverado Canyon coming in from south about 1 1/2 miles E of Ladd Canyon [approx. 0.12 km N, 0.07 km E of SW cor. sec.9, T5S, R7W, Santiago Peak quad.], Santa Ana Mts., Orange County, California. Coll: B. N. Moore, 1928. Ladd Formation, Holz-Baker transition. Turonian.
- 454 CIT = LACMIP 10873: Cretaceous shale, fireline about Hough's 80 on S side of stream, about 400' above creek, Silverado Canyon [about 450'S, 875'E of NW cor. sec.16, T5S, R7W, Santiago Peak quad.], Santa Ana Mts., Orange County, California. Coll: B. N. Moore, 1929. Ladd Formation, lower Holz Shale. Late Turonian.
- 978 CIT = LACMIP 10884: NE slope, and near crest of bluff overlooking Santiago Canyon [at about NE cor. sec.33, T5S, R7W], approx. 1 1/2 mi. SE of the dam just above the mouth of Harding Canyon, Santiago Peak quad., Santa Ana Mts., Orange County, California. Coll: W. P. Popenoe, 4/14/1933. Ladd Formation, Baker Canyon Sandstone about 100' above gray basal cgl. Turonian.
- 979 CIT = LACMIP 10885: 10' below 978, NE slope, and near crest of bluff overlooking Santiago Canyon [at about NE cor. sec.33, T5S, R7W, Santiago Peak quad.], Santa Ana Mts., Orange County, California. Coll: W. P. Popenoe, 4/14/1933. Ladd Formation, Baker Canyon Sandstone, about 90' above gray basal cgl. Turonian.
- 1058 CIT = LACMIP 10890: North side of Silverado Canyon Road, about 15' above rd., and 300'N 72°E of Holz Ranch house, Silverado Canyon [1390'N, 210'E of SW cor. sec.8, T5S, R7W, El Toro quad.], Santa Ana Mts., Orange County, California. Coll: W. P. Popenoe and others, 4/1/1933. Basal Baker Canyon Sandstone about 10' above top of conglomerate, Ladd Formation. Turonian.
- 1064 CIT = LACMIP 10893: Area S of Harding Canyon, Vulture Crags, just N of first large canyon cutting across Cretaceous beds S of Harding Canyon, about 2 mi. S42°E of the dam in Harding Canyon and 6800' N55°E of juncture of Santiago Creek and Trabuco Canyon Rds. [2600'N, 1625'E of SW cor. sec.34, T5S, R7W, Santiago Peak quad.], Santa Ana Mts., Orange County, California. Coll: W. P. Popenoe, 10/14/1934. Lower Holz Shale, Ladd Formation. Turonian.
- 1065 CIT = LACMIP 10891: Ss overlying basal Upper Cretaceous cgl., from crest of scarp on W side of Ladd Canyon, about 0.6 mi. N of juncture of Ladd and Silverado Canyons [1300'S, 300'E of NW cor. sec.8, T5S, R7W, Black Star Canyon quad.], Santa Ana Mts., Orange County, California. Coll: W. P. Popenoe, 3/3/1933. Ladd Formation, Baker Canyon Sandstone. Turonian.
- 1067 CIT = LACMIP 10883: Immediately above base of gray ss overlying gray basal cgl. [1800'N, 600'E of SW cor. sec.21, T5S, R7W, Santiago Peak quad.], Santa Ana Mts., Orange County, California. Coll: W. P. Popenoe, April 21, 1932. Ladd Formation, Baker Canyon Sandstone Member. Turonian.
- 1164 CIT = LACMIP 10079: S side Silverado Canyon near mouth of small N-flowing gully, and at top of lower fossiliferous sandstone series, about 400 feet (120 m) SE of Holz Ranch house in SE cor. sec.7, T5S, R7W [1025'N, 150'E of SW cor. sec.8, T5S, R7W, El Toro quad.], Santa Ana Mts., Orange County, California. Coll: W. P. Popenoe, May 15, 1935. Ladd Formation, Baker Canyon Sandstone Member. Turonian.
- 1212 CIT = LACMIP 10735: Little Cow Creek, ap-