



Figures 11-18. *Balanus kanakoffi* sp. n., LACM Locality 305; (11) interior of scutum, Paratype LACM 1205, height 8.5 mm; (12) shells on cidaroid spine, Paratype lot LACM 1206, length of group 16 mm; (13) interior of scutum, Paratype CAS 13162, height 6 mm; (14) exterior of scutum, Paratype CAS 13163, height 6 mm; (15) exterior of scutum, Paratype LACM 1207, height 7 mm; (16-17) exterior and interior of tergum, Paratype LACM 1208, height 8.5 mm; (18) interior of tergum, Paratype CAS 13164, height 7 mm.

Occurrence: LACM Loc. 305.

Range: Late Pliocene, California and Baja California; Pleistocene, Oregon to Baja California; Recent, southern Alaska to San Quintin Bay, Baja California.

Remarks: Fragments of two terga and one scutum are referred to this species. *Balanus nubilus* is abundant in the cool water Late Pliocene deposit at Moonstone Beach, California (e.g., UCMP Loc. B-7346; Allison, Durham, and Zullo, 1961), and is found at various Pleistocene localities along the Pacific Coast from Cape Blanco, Oregon (e.g., UCMP Loc. B-7372) south to Baja California (Ross, 1962, p. 27).

Balanus sp., cf. **B. pacificus** Pilsbry, 1916

Figs. 23-25

Occurrence: LACM Locs. 107, 305.

Range: (?) Late Pliocene, San Diego Formation; Pleistocene, central and southern California, Baja California; Recent, San Francisco, California, to northern Peru.

Remarks: Three shells that may be referable to this species were obtained from LACM Loc. 107. In addition, ten scuta from LACM Loc. 305 also appear to represent *B. pacificus*. The internal structure of these scuta is like that of Pleistocene and extant specimens, but the longitudinal striae are not as well developed. This difference may be the result of pre-depositional wear.

Balanus pacificus is a commonly encountered fossil in Late Pleistocene deposits at Tomales Bay (UCMP Loc. B-6354), Newport Beach (UCMP Locs. A-2509, A-3101, A-3102, A-3103), and in southern San Diego County (UCMP Loc. A-9005), California, and at Santa Ynez (UCMP Loc. A-3582) and San Quintin (UCMP Locs. A-8677, A-9586, B-3069) Bays in Baja California. This species has not previously been reported from Pre-Pleistocene rocks, but a possible ancestor occurs in the Late Miocene Santa Margarita Formation of the Nipomo quadrangle, California (UCMP Loc. A-1456).

Ross (1964, p. 489) separated this eastern Pacific species from the Tethyan *B. concavus* Bronn complex on the basis of the nearly horizontal rather than oblique summits of the radii and the absence of transverse septa in the parietal tubes.

Subgenus **Megabalanus** Hoek, 1913

Balanus wilsoni sp. n.

Figs. 33-46

Diagnosis: Cylindric megabalanid with large, subtriangular, untoothed orifice; parietes smooth with narrow, reddish stripes on white background; radii broad with nearly horizontal summits and small radial pores; radial septa