



Fig. 3. Individual infilled, clavate borings of *Gastrochaenolites* from CSUN loc. 1495. (A–B), Rare specimens showing basal concentric, serrated tool marks accentuated by the presence of gypsum. A, Hypotype LACMIP 12271, 13 cm in length, $\times 1.4$. B, Hypotype LACMIP 12272, 14.2 cm in length, $\times 1.5$. C, Specimen showing prominent bend near base, hypotype LACMIP 12273, 16.5 cm in length, $\times 1.7$.

that are accentuated by the presence of gypsum. Shape is elongate with little or no neck constriction. Cross section is circular throughout, and maximum diameter is close to the hemispherical base. Infilled borings are usually straight, but some (Fig. 3C) have a bend that ranges from 10 to 45 degrees from the vertical. Measurement of 25 individuals provide the following: length ranges from 4 to 27 cm, maximum diameter ranges from 1.3 to 9.5 cm, and conical angle ranges from 12 to 17 degrees. A number of infilled borings have a hemispherical or slightly pointed terminal protrusion of 1 to 2 cm in length. These small protrusions are probably secondary burrows that were begun and then abandoned.

Sediment infill is mostly coarse sandstone similar to the immediately overlying lithology. The fill sandstone can be poorly cemented to well-indurated, and there can be shell fragments and well-rounded volcanic pebbles (up to 13 mm in diameter). Clear-crystalline gypsum is also common. Sectioned infilled borings commonly display well-delineated secondary infilled borings or burrows.

In situ infilled borings commonly have the upper terminus cut by the overlying shell-hash layers, and only rarely do the borings extend a few centimeters upward into the overlying strata. Densities of infilled borings range from 1 to 2 per linear meter at the eastern and western margins of the study area to well in excess of

Fig. 4. Infilled basal contact of t

100 per square there is a pronounced bulbous ends, etration angles as 45 degrees for each other, even

According to in lithic substr are common, been reported the Gulf of Mexico New Zealand Isidro Formation Diego by Warren. The resemblance of created infilled clavate Kelly and Bro

Horizontal are connected diameters ranging in the infilled extensive scra burrows branch from and their burrows are as tions by Ekda