

***Terebra (Terebellina) hiwanneensis***  
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Plate 9, figures 15, 20-22; Plate 59, figure 10

Description: Shell moderately small and slender; protoconch consisting of 4 smooth whorls; aperture small, produced anteriorly to form a well developed canal; columella twisted, bearing 2 well defined folds; parietal callus light; siphonal fasciole not raised but bordered above by a raised thread, which within the aperture becomes the upper columellar fold, a moderately broad constriction separating the thread from the base of the body whorl; suture strong, subtended by a subsutural band of slightly less than a third of the width of the exposed portion of the whorl; subsutural band strong on adults but weak on the first 2 to 3 whorls; sculpture on the more flattened adult whorls consisting of relatively coarse, slightly curved, axial ribs below the spiral groove and corresponding narrow nodes on the subsutural band, but on the juvenile whorls the axials and nodes are more continuous due to the weaker spiral groove and less developed subsutural band, axials below the band in juveniles more outwardly bowed than in adults, axials exhibiting some range in spacing, but not becoming noticeably weaker in adults.

Discussion: *Terebra (Terebellina) hiwanneensis* is most closely related to *T. jacksonensis* Cooke from the Moodys Branch Formation (upper Eocene) of Mississippi, and to an undescribed species from the Yegua Formation (upper middle Eocene) of Texas, probably the species figured as *T. mirula* by Palmer (1937, pl. 72, fig. 10). It differs from *T. jacksonensis*

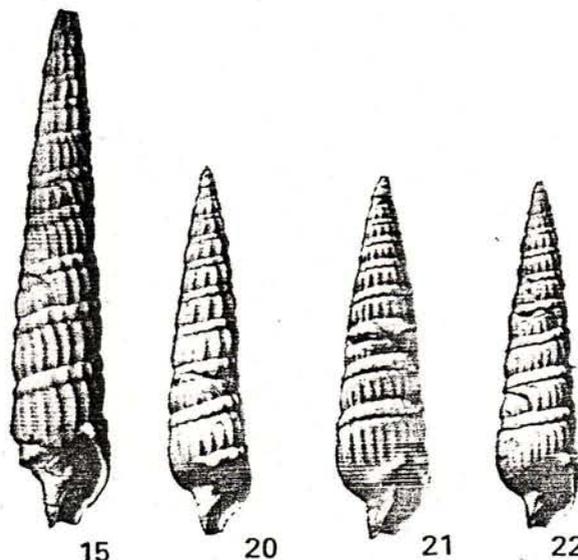
in being slenderer, more elongate, and in having a sharper spiral groove and a better developed subsutural collar, especially on the first 5 to 6 whorls. Specimens of the Yegua species in the National Museum from Orell's crossing, Elm Creek, 5.2 miles northwest of Giddings, Lee County, Texas, locality 10730, compare more with the Red Bluff species in shape, but like *T. jacksonensis* have a weaker subsutural collar and an even more weakly incised spiral groove. The axials on the early whorls of *T. jacksonensis* are relatively thinner and frequently fewer in number than on the adult whorls, whereas in the Yegua and Red Bluff species the axials are of the same relative strength on both young and adult whorls. *Terebra (Terebellina) hiwanneensis* has a larger protoconch than either of the Eocene species mentioned.

*Terebra (Terebellina) hiwanneensis* differs from *T. (T.) divisura* and the subspecies *clearyensis* in being much smaller and in having a narrower apical angle and a relatively slender shell. The subsutural band of the Red Bluff species is narrower but more elevated and nodose, and the spiral groove is somewhat wider. The axials of *T. (T.) hiwanneensis* are more crowded and straighter.

Type: Holotype 140752 USNM, paratype A 498028 USNM, and paratype B 560921 USNM all from the Red Bluff Formation, USGS locality 2633 (Plate 9, figures 15, 20, and 22 respectively).

Occurrence: Red Bluff Formation, USGS localities 2633, 5263, 6456, MGS localities 37, 38.

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15. Holotype 140752 USNM (x4). Height 16.9 mm, width 3.0 mm; USGS locality 2633.
  20. Paratype A 498028 USNM (x4). Height 12.0 mm, width 2.5 mm; USGS locality 5263.
  21. Figured specimen 481042 USNM (x4). Height 11.9 mm, width 2.8 mm; USGS locality 6456.
  22. Paratype B 560921 USNM (x4). Height 11.4 mm, width 2.5 mm; USGS locality 5253.