

NOTES

A RECORD OF SPRUCE (PINACEAE: *PICEA*) FROM THE PLEISTOCENE OF SOUTH-CENTRAL NEW MEXICO.—Despite the general abundance of Pleistocene floral data from the Southwest, the macrofossil record of montane conifers from this region is scant. A reexamination of fossil fill collected from Anthony Cave in 1971 has uncovered a single needle belonging to the genus *Picea* (UTEP 29-107).

Anthony Cave is a small limestone cave located in the Franklin Mountains on the boundary between Doña Ana Co., New Mexico, and El Paso Co., Texas (SW $\frac{1}{4}$ SE $\frac{1}{4}$ Sec. 35, T26S, R4E). The cave is situated at an elevation of 1555 m in the lower Upper Sonoran Life Zone (Smartt, Southwest. Nat. 22:1-19, 1977). The flora now occurring near the cave entrance is dominated by white-thorn (*Acacia constricta*), Mormon tea (*Ephedra trifurca*), ocotillo (*Fouquieria splendens*), and creosote bush (*Larrea tridentata*). Nearby canyon bottoms are characterized by sumacs (*Rhus choriophylla*, *R. aromatica*), mountain mahogany (*Cercocarpus montanus*), silktassel (*Garrya wrightii*), and oaks (*Quercus*).

The spruce needle was found in fill from an excavation site near the back of the cave along a west wall (UTEP Loc. 29). This site was covered with a thin layer of flowstone (ca. 1 cm) in its pre-excavation condition and produced fossil-containing fill to a depth of about 10 cm. The associated fossil fauna includes the meadow vole (*Microtus pennsylvanicus*), the Mexican vole (*M. mexicanus*), the montane vole (*M. montanus*), and Merriam's shrew (*Sorex merriami*). The fossil biota suggests a late Pleistocene pluvial period characterized floristically by montane conifers and heavy grass cover. Material for more accurate dating is not presently available. Fossil gastropods from late Pleistocene slope deposits near Anthony Cave also suggest a mesic flora including gambel oak, pine, and fir (Metcalfe, New Mexico Geol. Soc. 20th Field Conf.:158-164, 1971).

Only two previous records of spruce needles from the Pleistocene of the Southwest are known. Spruce was found in packrat midden material from the Guadalupe Mountains, Culberson Co., Texas (Van Devender, et al., pp. 107-113 in R. Wauer and D. Riskind (eds.), Nat. Park Serv. Trans. Proc. Ser. No. 3, 1977). The midden occurs at an elevation of 2,000 m, and material from the midden is about 13,000 years old. Spruce also is known from Cowboy Caves, Wayne Co., Utah (Spaulding and Van Devender, Southwest. Nat. 22:269-271, 1977), from Pleistocene deposits approximately 12,000 years old. The elevation of this site is 1710 m. The Anthony Cave record currently represents the lowest elevational occurrence of spruce macrofossil material from Pleistocene deposits in the Southwest.

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