ing for ½ hr the solvent was removed *in vacuo*, the residue dissolved in chloroform and filtered. Evaporation of solvent left a resin consisting of almost pure S-acetylpantetheine. (Found: C, 47.8; H, 7.5; N, 8.5. $C_{13}H_{24}O_5N_2S$ requires C, 48.6; H, 7.5; N, 8.7%.) It was shown to be homogeneous by paper chromatography in the following solvents: butanol-water (R_F 0.73), amyl alcohol-water (R_F 0.70), butanol-acetic acid-water (R_F 0.82). The product was demonstrated on paper by spraying with ammonia solution prior to the cyanide-nitroprusside spray.

This material was indistinguishable from a sample of S-acetylpantetheine synthesized in a different way by King, Stewart, and Cheldelin (*2*). It acetylated hydroxylamine with great rapidity at room temperature in dilute solution.

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J. BADDILEY
E. M. THAIN
Lister Institute of Preventive Medicine, London

Pleistocene Corals at Lake Worth, Florida

A COLLECTION of corals believed to be of Pleistocene age has been obtained in Lake Worth, Fla., some 60 miles north of Miami, the northern limit of the living reefs. The coral-bearing zone is buried under sand at a depth of 30 or 40 feet above sea level. Fragments of corals were first found in January 1950 by John H. Irons, of Lake Worth, while he was hunting shells on the spoil bank made by a large suction dredge operating near the western shore of Lake Worth, about half a mile north of the bridge connecting the town of Lake Worth with Palm Beach. He has kindly agreed to my publishing this note.

Mr. Irons' interest was aroused because the corals were thoroughly impregnated with calcite or aragonite, a mode of preservation quite different from that of the geologically younger mollusks on the spoil bank. He has continued to search systematically for fossil corals and has accumulated several hundred specimens, which range from small heads to masses weighing more than 100 pounds. Although the corals are recrystallized, the details of structure of many are plainly visible through the clear crystal, and the beauty of the specimens is thereby enhanced.

A representative assortment of corals from the Irons collection was examined by John W. Wells, of Cornell University, a specialist on corals. It included ten species representing eight genera, and several additional species have since come to light. Nearly all the species identified by Dr. Wells are common in the Pleistocene and living reefs of the Florida Keys and the West Indies. The Lake Worth corals are particularly interesting because of their occurrence north of their present range in Florida. No comparable Pleistocene reef has previously been discovered north of the keys, which are themselves based on a massive Pleistocene reef, the Key Largo limestone.

That the fossil corals at Lake Worth are Pleistocene seems obvious, but to determine to which part of the Pleistocene they should be referred needs further consideration. The occurrence is about half a mile west of the Palm Beach peninsula and about 50 feet below its summit. This peninsula appears to have accumulated as an offshore bar during Pamlico time, when sea level stood 25′ higher than now. The corals are probably older than the Pamlico.

A further indication of antiquity is the fact that the corals are buried under 20′ of sand. The lower part of this sand may be contemporaneous with the bar, but the upper part was probably deposited in Silver Bluff time, for the dredged area lies just east of the Silver Bluff shoreline. Silver Bluff and Pamlico time together are believed to span the time of deposition of the Peorian loess.

The corals could not have lived during the preceding Illinoian (third) glacial stage, for the area was then presumably dry land. Moreover, the sea water at this latitude was then probably too cold for these tropical corals. During the Yarmouth (second) interglacial stage conditions would have been more favorable for the growth of corals. All of southern Florida was then submerged, and the water over the site where the corals grew may have been as deep as 170′ at the beginning of the Yarmouth, or as shallow as 70′ near its close. This range of depth is quite suitable for corals, though rather deep for massive reefs (*1*). The Yarmouth, then, seems to be the latest time for the growth of corals at Lake Worth.

In terms of coastal-terrace chronology, the Yarmouth is supposed to comprise the interval from the formation of the Okefenokee terrace (sea level about 140′ above the present) to the Talbot (sea level 42′), the intervening steps being the Wicomico at 100′ and the Penholoway at 70′ (*2*).

The Lake Worth corals probably form part of the limestone composing the "rim of the Everglades," which must be older than the Pamlico, because it supports (at West Palm Beach) a sand bar of the Talbot formation. This limestone has been interpreted (*3*) as a facies of the Anastasia formation, which consists typically of coquina. The corals may be contemporaneous with the deposition of the Key Largo limestone, which is the southern extension of the "rim of the Everglades" and which has been correlated with the Anastasia. The coral heads may have been firmly cemented with other organisms into a massive reef, but this is not certain, because the entire collection was recovered from dredgings.

C. WYTHE COOKE
U. S. Geological Survey, Washington, D. C.

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