New Products

The information reported here is obtained from manufacturers and from other sources considered to be reliable. Neither Science *nor the writer assumes responsibility for the accuracy of the information. All inquiries concerning items listed should be addressed to the manufacturer. Include the department number in your inquiry.*

■ X-Y PLOTTER features static accuracy said to be ±0.1 percent of full scale and dynamic accuracy ±0.2 percent of full scale at 10 in./sec tracing speed. Speed of response is 20 in./sec on either axis. Paper is held on a flat vacuum platen. Push-button controls are provided for *X* and *Y* scales, vacuum, plot clear, four-quadrant plot, reference plot, *X-Y* reference continuous trace, and manual plot. Plotting is controlled by panel pushbutton or at remote location. (Librascope, Inc., Dept. Sci267, Glendale, Calif.)

■ CARDIAC PACEMAKER is designed to stimulate ventricular function, during and after surgical repair of septal defects, by internal application with at least one wire attached directly to the myocardium for temporary stimulation or with a bipolar patch for prolonged stimulation. Output pulse is a square wave of approximately 2-msec duration. The self-contained power source will operate the transistorized device approximately 1000 hr. Dimensions are 4 by 2½ by 1 in. (Medtronic, Inc., Dept. Sci269, 818 19 Ave. NE. Minneapolis 18, Minn.)

■ ELECTROMAGNET is available in two models, the LM4-AG with adjustable gap and the LM4-FG with fixed gap specified by the purchaser. Replaceable pole caps are 4, 6, and 8 in. in diameter. Tapered pole caps are available. A thermocouple buried in the wire-wound coils permits monitoring of temperature, and water-cooled panels are built into the coils. Coils are tapped at 3 and 16 percent of turns. Coil current is 2.5 amp (max.) and voltage, hot, is 300 volts. Total turns, 11,000. (Applied Radiation Corp., Dept. Sci274, 2404 N. Main St., Walnut Creek, Calif.)

■ SIGNAL SCANNER is capable of switching up to 400 one-wire, 200 two-wire, or 100 four-wire inputs. With properly shielded input and output connections, it is said to be possible to switch signals as low as 10 μv. Start channel number and stop channel number may be preset from 000 to 999 by six selector switches. Operation can be automatic or manual, with single cycle or continuous cycling in the automatic mode. (Kin Tel Div., Cohu Electronics, Inc., Dept., Sci276, 5725 Kearny Villa Rd., San Diego 12, Calif.)

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Letters

(Continued from page 1678)

map (Fig. 1) is confusing unless one colors it or uses both the Raritan folio (1/125,000) and the Stanhope (N.J.) topographic quadrangle (1/24,000) for reference.

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J. P. Minard presents some interesting observations with respect to the presence of deeply weathered bedrock immediately north of the Wisconsin glacial moraine in New Jersey. The author relates this deep-seated weathering to post-Wisconsin time. That the saprolite exists in the area is not questioned. Relating the weathering of the bedrock to post-Pleistocene time, however, raises some serious questions. The author's interpretation of when this weathering took place is in direct contradiction to publications of mine (*1–3*), and it does not agree very well with the bulk of the published opinion of surficial geologists (*4, 5*).

One feature which appears to be quite characteristic of soils on deposits of post-Sangamon age in the podzolic area is that the bottom of the B horizon is very distinct, grading abruptly into a C horizon of comparatively fresh material. Below the B horizon the minerals (*3*) and the morphology show few changes since deposition of the till. This unaltered C horizon is not only demonstrable in the field throughout the northeastern United States and southeastern Canada but has been well documented in countless publications on soils for nearly half a century.

With soils which pre-date the Wisconsin glacial stage, a deep-seated weathering has taken place to depths of many feet, often well into the bedrock. Soils which have undergone the long periods of weathering of the Yarmouth and Sangamon interglacial stages show only minor color variations between the B and C horizons, the C horizon having been highly altered (*2*).

If the weathering processes were deep-seated during post-Wisconsin time, why were they confined to one locality? Certainly major climatic changes were not so highly localized as to effect major alterations in one specific area while effecting no appreciable weathering below the solum in other, contiguous areas of Wisconsin glaciation. We cannot, on the one hand, speak of deeply weathered and differentially altered minerals of gneissic bedrock to a depth of 10 to 20 feet below the surface in one location and completely ignore the widespread persistence of unweathered carbonate and other minerals 2 to 4 feet below the surface in the same general area.

The author indicates that the lack of "congeliturbate structure" would preclude the probability that the regolith was frozen during glaciation. The absence of special structural conditions (induced by cryopedologic processes) in the soil in one locality in itself proves little. While it has been demonstrated (*5*) that cold-climate processes did operate to a degree in Wisconsin glaciated areas, field observations clearly show that these well-defined cold-climate structures are more commonly absent than present.

The author's arguments for rapid weathering at the site prove little, and the references cited have only indirect relation to the subject. It is unfortunate that the voluminous literature relating directly or indirectly to the lack of deep-seated weathering in deposits of Wisconsin age was not tied in with the article.

In addition to the site mentioned by the author, there are other, similar locations in New Jersey within the area of Wisconsin glaciation which show deep-seated weathering. These scattered atypical conditions appear to be confined to a belt a few miles wide immediately north of the Wisconsin terminal moraine. If the sites were glaciated, there must have been a minimum of glacial scouring. On the basis of regional soil morphology in the fringe areas of the Wisconsin-glaciated area, these scattered highly weathered soils appear to resemble more closely those of deposits of Illinoian and Kansan age (Annandale) than those of Wisconsin age (Rockaway).

While I disagree with Minard's interpretations as to when the weathering of the bedrock took place, his recording of the observation in itself represents an important contribution to Pleistocene research.

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