

## Subsurface Temperatures

**February 15, 1961**

The surface waters off southern California may become temptingly warm to swimmers in May or June but a few feet below the surface winter has just set in.

This observation is a by-product of a study of sea temperatures off La Jolla conducted by Robert S. Arthur, Associate Professor of Oceanography at the University of California's Scripps Institution of Oceanography. Writing in a recent issue of *The Journal of Geophysical Research*, he describes results of repeated observations of temperature during the International Geophysical Year.

He found, as other scientists have also, and as divers well know, the waters 75 feet below the surface reached their minimum temperatures in May, June and July. The reason is that upwelling has set in. In response to changes in the wind pattern, cool waters are rising from the lower depths to intermediate layers. Upwelling is partially responsible for the biological wealth of the California waters.