

Figure 2-2a. The Atlantic oxygen concentration at the so-called intermediate oxygen

maximum (in the vicinity of 2500–3000 m over much of the basin). Note the obvious

tongue at the western boundary of the ocean. From Wüst (1935). Units are ml/l.

Figure 1-1b. Surface elevation of the ocean in cms during 10-20 March 1993 as seen by the TOPEX/POSEIDON altimeter satellite (after Stammer & Wunsch, 1994).

The elevation is relative to a 2-year mean, has been averaged over 2° squares, and the 10-day “window” blurs the most rapidly changing features, therefore rendering

the result somewhat simpler than a true instantaneous picture. Nonetheless, both data and model confirm the essentially turbulent nature of the circulation.

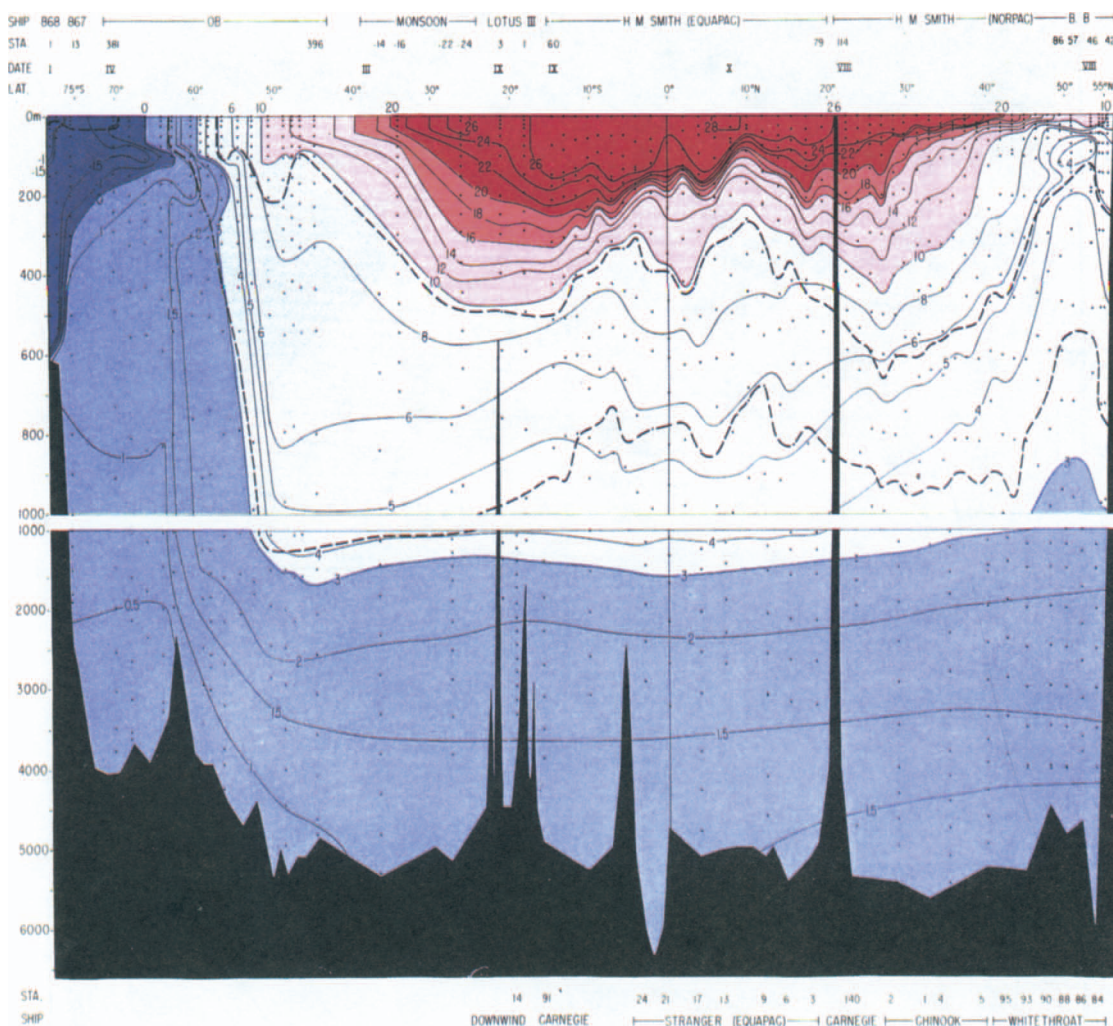


Figure 2-2c. From Reid (1965). Temperature section down the central Pacific Ocean. Dashed lines denote approximate location of two

surfaces of constant density. Expedition names, station numbers, dates, and latitudes are indicated along the top.

Outcrops of the isotherms at high latitudes are regions where dense water is formed, which sinks to mid-depths.

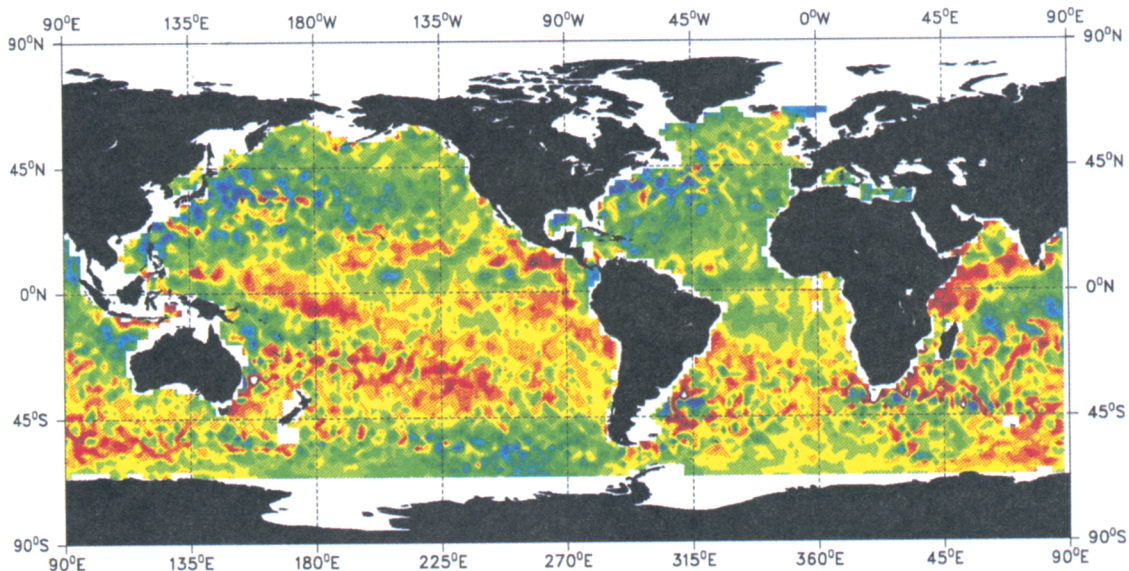


Figure 1-1b.

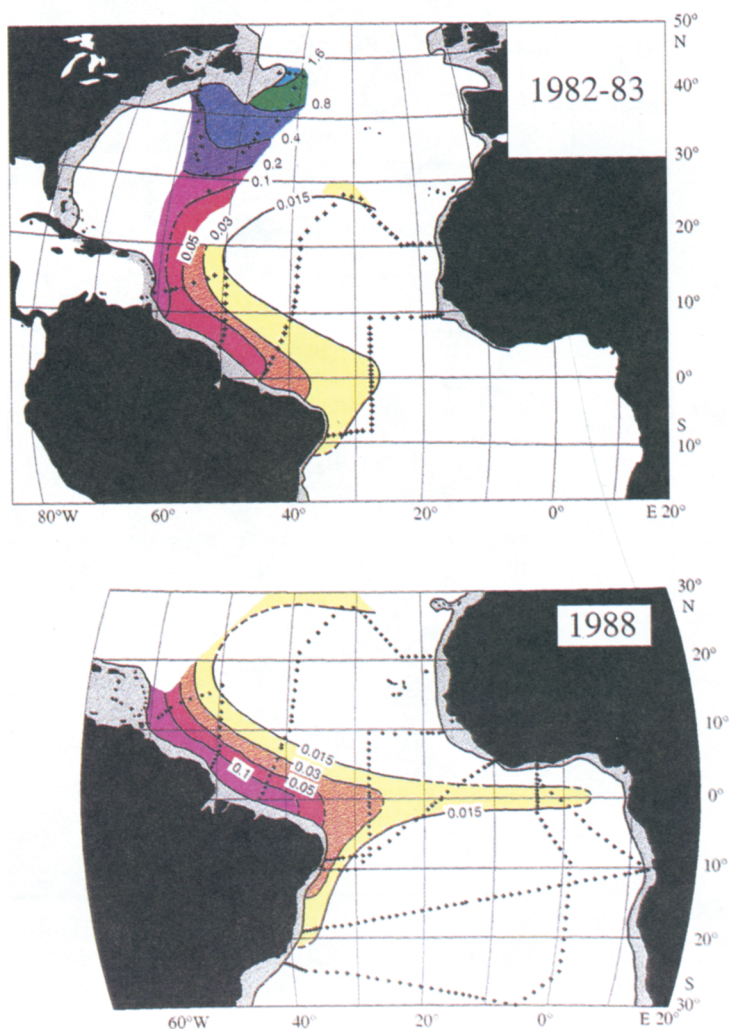


Figure 2-21. Concentration (in picomoles/kg) of a fluoro-carbon (CFC-11) on the density surface $\sigma_{1.5} = 34.63$ (i.e., reference pressure of 1500 decibars) in 1982-83 (a) and in 1988 (b) (Weiss et al., 1985, 1993, and personal communication, 1994). This surface lies near 1500-2000 meters over much of the subtropical Atlantic. CFCs are artificial compounds which, having been injected into the atmosphere, dissolve at the seasurface. They are then carried into the deep ocean through high-latitude convective processes.

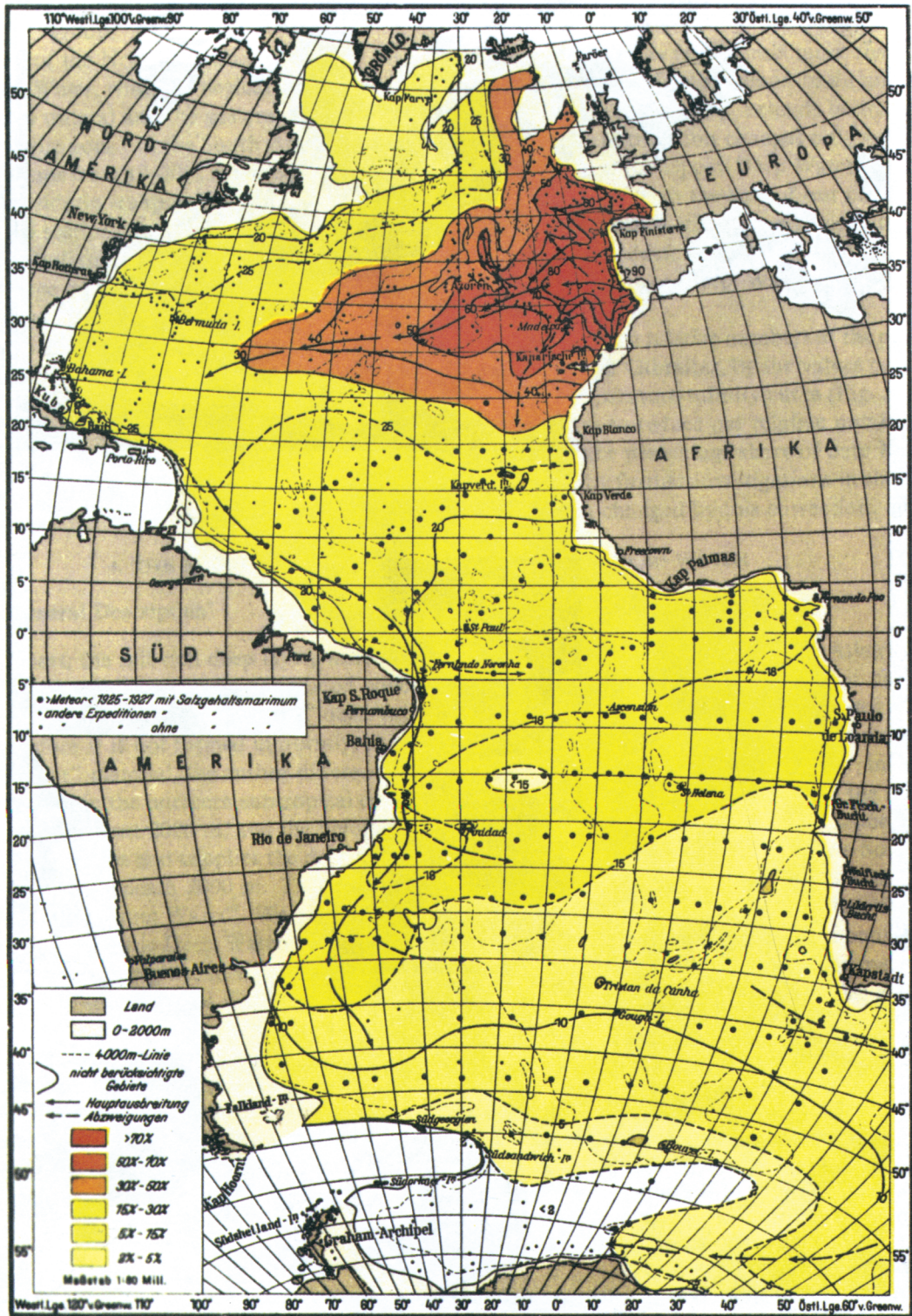


Figure 2-2b. Salinity in parts per thousand minus 35 at the “intermediate salinity

maximum” in the Atlantic (the depth ranges from about 1000-2000 m). The most con-

spicuous feature is the Mediterranean salt tongue (Wüst, 1935).