hormones, although this would be physiologically and developmentally more complex. In gray and black areas, aggregation of pigment seems to continue, and melanocytes migrate toward the surface from the base of the epidermis until diffuse pigment is largely replaced by granular pigment. The process is apparently stopped at some point, after which increase in thickness of the epidermis may result in a lower average density of pigment.

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OCCURRENCE OF TWO CONGRIDAE LEPTOCEPHALI IN AN ESTUARY

During the night of 23-24 August 1971, I caught two congrid leptocephali in Montsweag Bay, part of the Sheepscot River-Back River estuary, Wiscasset, on the southern Maine coast. These larvae were identified as conger eel, *Conger oceanicus* (D. G. Smith, pers. commun., 15 April 1974). The estuary was described by Stickney (1959). Recksiek and McCleave (1973) provide additional information about the estuary and Montsweag Bay. The leptocephali were collected near their sampling station G3 (lat. 43°56'N, long. 69°42'W). Briefly, Montsweag Bay is a shallow (1 m at mean low water) and wide (2.4 km) basin, but it has a narrow channel (9 m deep at mean low water) through most of its length. Narrow openings at its northern and southern ends allow tidal flow. Mean tidal difference is approximately 3 m. Seasonally, water temperature extremes in Montsweag Bay range from 0.0° to 18.5°C. Salinity ranges from 7 to 30‰. Gear used was essentially that described by Graham and Venno (1968).

One larva (98 mm TL) was captured during the flooding tide 1 m below the surface; the other (91 mm TL) during the ebbing tide within 3 m of the bottom. Water depth at this location was approximately 9 m at mean low water. During this period, the average salinity was 26.0‰ and the average water temperature was 17.7°C.

Conger eel adults and leptocephali have been reported from the Gulf of Maine (Bigelow and Schroeder 1953), but apparently most leptocephali are found in the western North Atlantic (Schmidt 1931). Conger eel leptocephali, however, have never been reported from such low-salinity water. Bigelow and Schroeder (1953) illustrated one 84 mm long from Chesapeake Bay, but they do not give the salinity at the collection site. They also state that conger eel leptocephali grow to 150-160 mm. Smith (pers. commun., 15 April 1974) commented that my specimens were beginning to metamorphose since the gut of each had shortened noticeably. Conger eel leptocephali apparently are able to tolerate this low-salinity water at least during metamorphosis.

If conger eel leptocephali typically grow to the size reported by Bigelow and Schroeder (1953), then they must shrink tremendously in length during metamorphosis. My specimens probably shrank during storage, but probably not enough to account for that much size difference.

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CHLORINATED HYDROCARBONS IN SEA-SURFACE FILMS AND SUBSURFACE WATERS AT NEARSHORE STATIONS AND IN THE NORTH CENTRAL PACIFIC GYRE

Chlorinated hydrocarbons, DDT residues, and polychlorinated biphenyls (PCB's) entering the oceans via atmospheric transport, runoff, and outfalls (National Academy of Sciences 1971) may be concentrated in the lipid constituents (Garrett 1967; Duce et al. 1972) found in surface films. The chlorinated hydrocarbons can then enter marine food chains, most probably by association with particulate detritus and subsequent ingestion by filter-feeding organisms. Further concentration in higher trophic levels is well documented (see, for example, Harvey et al. 1971) and will not be discussed here.

There have been only two reported studies on the concentration of DDT residues and PCB's in surface films. Seba and Corcoran (1969) found high concentrations of *p,p'*DDT, *p,p'*DDE, *o,p*DDT, aldrin, and dieldrin in the surface microlayer collected at locations in Biscayne Bay, Fla., and 10 miles offshore in the Florida Strait. Duce et al. (1972) found that PCB's (but no DDT residues) were concentrated in surface films from Narragansett Bay, R.I. Seawater collected at 1-2 m in the California Current was analyzed for DDT residues (Cox 1971) and these results will be taken as subsurface water concentrations in California coastal waters.

This note reports on the content of *p,p'*DDT, *p,p'*DDE, and PCB's in surface films collected at coastal stations off southern California and Mexico; and in surface films, subsurface waters, and particulate matter from the North Central Pacific Gyre (Table 1).

Methodology

All surface films were collected with a Monel[1] or stainless steel screen (Garrett 1965) into 2.5-liter glass bottles. The coastal samples (SIO 1-2; M 1-4) were poisoned with mercuric chloride. The Cato samples were filtered on shipboard through solvent-extracted and ignited GF/C glass-fiber filters. The filters were frozen in glass vials at -20°C, and the filtrate preserved with 75 ml of hexane. Subsurface samples were collected in 2.5-liter glass bottles 10-15 cm below the surface and treated as above. In all operations the surface films were collected from a skiff at least 0.5 mile upwind from the ship. All glassware, screens, filters, etc., were scrupulously freed of organic matter by ignition at 550°C, rinsing with double distilled solvents, or both.

In the laboratory, the filtrates were acidified to pH 2 with distilled 6N HCl and extracted with three 60-ml portions of hexane. The hexane extracts were dried by passage through anhydrous Na_2SO_4, and then concentrated to 10-15 ml in a Kuderna-Danish evaporator. This extract was further reduced to 50 μl in vacuo, put onto an alumina microcolumn (McClure 1972), and eluted with 3.5 ml of hexane. The eluate was dried in vacuo and taken up in 50 μl of isooctane. The filters were extracted in a soxhlet overnight with 20 ml of

[1]Reference to trade names does not imply endorsement by the National Marine Fisheries Service, NOAA.