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NATURE NOTES

The problems of chemical pollution

by "Sea-Pie"

Over the past ten years or so there have been, firstly, alarming and depressing reports of damage done to wildlife by dangerous pesticides used in agriculture and elsewhere; secondly, assurances that the dangers had been recognised and that action was being planned; thirdly, statements that certain remedial steps had, in fact, been taken; and, lastly, promises that the situation was to be kept under continuous review.

One might, therefore, be pardoned for imagining that the worst was, perhaps, over, that everything was now under control, and that we might soon be out of the wood.

Things do not seem to be working out quite so simply and smoothly as that. The question of highly toxic chemicals is one that needs to be constantly and carefully watched.

Not only are certain dangerous organo-chlorines still in use on the land, but a new and equally serious problem has developed: that of using the sea as a dump for dangerously toxic industrial waste. Clearly, we still have a very long row to hoe.

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The current number of "Birds," the official magazine of the Royal Society for the Protection of Birds, carries a forceful leader by its director, Mr Peter Conder, who believes that not nearly enough is being done at Ministerial level, particularly in the matter of the organo-chlorine pesticides.

In December, 1969, the Advisory Committee on Pesticides and Other Toxic Chemicals recommended, among other things, that aldrin, dieldrin and heptachlor, which had massacred countless birds in the past, should be withdrawn, as should the use of D.D.T. in garden pesticides.

The organo-chlorines formerly used against wheat bulb fly were in due course withdrawn but have been replaced by organ-phosphorus alternatives which, though much less persistent, are still dangerously toxic.

Moreover, D.D.T. is not, for the time being, to be taken out of garden use, and the reason is, to quote Mr Conder, "that industry over-estimated the number of branded containers it would need, and wishes to dispose of them. So they keep the containers and manufacture more D.D.T. to fill them."

He goes on to ask: "What happens if the manufacturers over-estimate their D.D.T. requirements – will they then make more containers?"

In the same issue, the chairman of the R.S.P.B. Council, Mr Stanley Cramp, also calls attention to the dangers inherent in D.D.T. and quotes from the Third Report of the Research Committee on Toxic Chemicals, in which it is stated: "There is now substantial experimental evidence to show that D.D.T. in sufficiently high (but still sub-lethal) concentrations disturbs certain metabolic functions in birds, causing in particular a delay in the onset of sexual maturity and thinning of the eggshell.

"These levels were reached in the affected predatory bird populations where evidence of reduced egg-shell thickness, lead-

decline in breeding success was observed."

The report mentions also the marked decline of fish-eating birds such as ospreys and pelicans in coastal regions of California adjacent to areas of high D.D.T. usage.

On the credit side we have now reported in "Habitat," that Monsanto Chemicals, the principal manufacturers of P.C.B.s, will cease to supply these chemicals to firms who use them in non-controllable applications, for example, in paints and varnishes. Other manufacturers have indicated that they will not be taking on business in the U.K. that Monsanto is dropping.

It will be recalled that high concentrations on P.C.B.s were found in the livers of many of the dead seabirds washed ashore in the spectacular "wreck" of September/October, 1969.

Since this seabird disaster, P.C.B.s have assumed a greater significance as an environmental pollutant.

They have been in wide commercial use since about 1930 but it was not until 1966 that certain compounds that had been found in wildlife tissue and which did not correspond to the retention characteristics of any known pesticide, were identified by a Swedish scientist, Jensen, as belonging to a range of polychlorinated biphenyls.

Jensen had found P.C.B. in pike and had looked at eagle feathers in a museum and found it only in specimens caugh after 1944. In the U.S.A P.C.B. residues have been reported present in a wide range of bird species, including peregrines from the Arctic, grebes, petrels, shearwaters, auks, gulls, terns and some land birds, as well as freshwater fish and a fish-hat.

In seabirds from the Pacific contamination was very marked and suggests that some P.C.B residues come from atmospheric fallout as well as from industrial effluents draining into coastal waters.

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