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The Editors
Cabinet
181 Wyckoff Street
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Re: “Plaice and Place”

Dear Cabinet:

This letter replies to your query on the larger significance of space and locality in the investigation of the European plaice, *Pleuronectes platessa*. Now this is an interesting issue, and it seems to me there are several ways you might go at it. Specifically, I think there are two very different scales at which the problem might usefully be addressed. A few thoughts and references follow.

First, if you wanted to use the problem as a jumping-off point for epistemological considerations, you should look at the critical work done in the late nineteenth and early twentieth century on the distribution and migration of plaice in the North Sea. I am thinking here of Petersen’s tagging efforts, and particularly his enormously consequential findings in the Limfjord experiments of the mid-1890s. As you may know, Petersen got interested in the efforts that local Danish fishermen were making to transplant plaice populations from the western basins of the fjord (the Nissum broad)—where they were endemic and heavily fished—to the narrower eastern reaches in the direction of Kattegat, where plaice had never been seen. Using his curious bone-and-silver-wire staple-tags (an excellent reason to avoid being a plaice), Petersen monitored the growth rates of these newly seeded populations, and discovered to his surprise that young plaice in these virgin waters grew with astounding speed. He concluded from this observation that the growth rate of plaice was strongly density-dependent. Important as this finding was, it played a somewhat pernicious role in future debates about fishing regulation, since careless (or Machiavellian) commentators could always make trouble for emerging consensus on minimum length regulations or total catch limits by arguing that maybe declining yields were not a result of *over*-fishing, but rather of *under*-fishing. While there are scenarios in which increased exploitation of a fishery does indeed increase total productivity, this was by no means the situation for flatfish in the North Sea in

the early twentieth century, so the whole thing was a bit of a red herring (if you will). A decade later this had become a good deal clearer as a result of Garstang's research trawls and tagging program. His efforts to plot size and sex patterns in North Sea catches, both seasonally and historically, eventually yielded a significant hypothesis about the annual breeding migrations of North Sea plaice—and formed the basis of what would become Heincke's Law (which states that the size of a North Sea plaice varies inversely with respect to population density and directly with respect to depth and/or distance from shore). Perhaps more immediately significant as far as conservation goes, so many of Garstang's tagged fish were promptly caught by fishermen that it quickly became clear that fishing pressure on the species was catastrophically higher than even the most sanguinary estimates had allowed. For more on all this, look at the original papers:

- Petersen, C.G.J. "Increased fishery by transplantation of plaice." *Report of the Danish Biological Station* 6 (1896).
- Petersen, C.G.J. "What is overfishing?" *Journal of the Marine Biological Association* 6 (1903): 587-94.
- Garstang, W. "The distribution of plaice in the North Sea, Skagerrak and Kattegat, according to size, age, and frequency." *Rapports, Conseil Permanent International pour l'Exploration de la Mer* 11 (1909): 65-133.
- Garstang, W. "Report on experiments with marked plaice during 1904 and 1905." *Report on Fishery and Hydrographical Investigations in the North Sea and Adjacent Waters: Southern Area* 4 (1912): 153-224.

I wouldn't want to predict where close work on this material would lead, but one would expect to see opportunities to consider some fundamental problems: e.g. *What is a population?* By what characteristics (geographical, morphological, temporal) can such a thing be known? And so on. It ought to be possible to get beyond the humdrum matters of fisheries biology pretty promptly (though those are themselves more interesting than you might initially think).

As for the second approach, we might call it "geopolitical," rather than epistemic, since it is in fact the case that the plaice problem in the North Sea was substantially the impetus to the formation in 1902, in Denmark, of the International Council for the Exploration of the Sea (ICES)—which started out as a multi-national fixed-term program of research into fisheries-related problems in the North Sea. While the organization was not especially successful in driving regulatory policy in the first half of the twentieth century, it did become a significant stakeholder organization for supporting research and nurturing diplomatic links among the nations of northern Europe. I've been in their archives (in Copenhagen—a handsome statue of Kierkegaard presides at the entrance), and there is lots of juicy stuff in there related to the emergence of international law and natural resource use. I am not going to press the point here, but someone with imagination could make the hyperbolic claim that *Pleuronectes platessa* is the flatfish that lies at the origin of the European Union. I have read dumber papers.

At any rate, I wish you all good luck with your project, and do not hesitate to let me know if I can be of further use to you. On a personal note, I notice you all are based in Brooklyn: I grew up in Queens, where my father (a German hydrological engineer) worked for Con Ed. I have fond memories of a youthful expedition with him to a set of abandoned outflow ducts on the Gowanus. Sigh. The old country...

Sincerely,



Sanelma Nicht