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Deep-Sea Plunder and Ruin

By LES WATLING and GILLES BOEUF

A historical moment for the life of the oceans is at hand as the Fisheries Committee of the European Parliament wrangles with proposed legislation to phase out the use of deep-sea-bottom trawls and other destructive fishing gear in the Northeast Atlantic. And yet this crucial legislation could well be killed in coming days, not least because some of the committee's 25 members represent districts with powerful interests in deep-sea fishing.

As they discuss the merits of the legislation, many of the panel's members are prone to repeating partial truths supplied by lobbyists about the sustainability of deep-sea fish stocks and the lack of damage to fish life at the bottom of the ocean. If these voices prevail in a vote later this month, then the committee will have succeeded in keeping the measure bottled up and away from consideration by the full Parliament.

The biodiversity of the deep sea is equaled only by that of tropical rain forests, and the destruction of rain forests has long been known to affect biodiversity and the global climate. Similarly the deep sea is home to countless species, including the oldest known living animal and to life-forms found nowhere else. Ninety percent of the ocean is below 200 meters, but not much is known about life in the deep sea; expensive research sampling has been done in about 1 percent of this vast area.

Over the years, as fisheries in shallow waters collapsed, the fishing industry began looking to the deep for new species to exploit. Most deep-sea fish have flesh that is not palatable, but a few were found that could be marketed for human consumption, if filleted and renamed to be made more attractive, or for processing into food pellets for poultry. These stocks were readily attacked using trawls large and heavy enough to reach as deep as 2,000 meters, and it took only 10 to 15 years to reduce the fish biomass by about 80 percent.

In 2011, vessels from eight E.U. countries landed 15,000 metric tons of four species of marketable deep-sea fish, which represents only 0.4 percent of Europe's fish haul. Several deep-sea fish species are poorly fertile (2 to 4 juveniles a year for the shark Centrophorus) and others reproduce for the first time when quite old (up to 32 years). Most of them are more biological curiosities than fishing stocks.

Bottom trawls are not selective; in the Northeast Atlantic alone they catch untold amounts of more than 100 species of fish. Deep-sea bottom communities harbor species that can be large, but are delicate and fragile, such as corals and sponges. Deep-sea corals are not what we are used to seeing in tropical waters, and with a few exceptions they do not build

massive reef structures. Instead, many are more akin to trees, sometimes more than three meters high, and sometimes very old, often reaching more than 100 years and occasionally more than 4,000 years. These are smashed by trawl gear. Bottom images of trawled deep-sea areas, and two seamounts I visited with a deep-diving remote vehicle, show that nothing is left standing in the wake of this type of fishing gear.

The deep sea is characterized by its long-term stability. Animals living there may not experience any change in conditions over the whole of their lives. As a result, even those species living on or in the muddy bottom do not have massive and rapid reproduction as part of their life strategy. That is, there are few "weedy" species in the deep sea.

In the Northeast Atlantic, the area of seafloor reachable by deep-diving trawls amounts to an area about the size of Britain. This expanse can be trawled completely every two decades. Massive disturbances like those caused by bottom trawls do not show the rapid recovery times seen in shallow waters. Rather, deep-sea bottom communities remain disrupted for decades or centuries, and may even never recover given other changes occurring in the ocean.

Eliminating the use of trawls in the depths of the Northeast Atlantic would seem to be a no-brainer. But the proposal has turned into a drawn-out fight in the Fisheries Committee mounted by those legislators who have the unbridled support of the fishing industry and, in France at least, a government-funded research institute. Moreover, this is a battle over a small amount of real estate that produces a diminishing number of fish for a handful of companies who, despite massive subsides from both the E.U. and their own states, are not even profitable — all the while destroying countless organisms that represent the library of life on Earth.

There is no doubt that deep-sea animals are very different from those living in shallow waters, that they grow and reproduce very slowly, and that they live for very long times in conditions where disturbance is rare. Because most deep-sea animals are fragile and delicate, even if large in size, they will never withstand the level of disturbance caused by trawl gear. And there is no doubt on the part of the more than 300 scientists worldwide who signed a declaration that this form of fishing should be eliminated from the deep sea. Whatever their reasons, Europe's fishing corporations and their parliamentary allies — the "merchants of doubt" — are making one last stand even in the face of scientific consesus. But this time the doubters may have run out of viable arguments.

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