

which Sir James Maitland had carried out his operations with regard to fish culture. He dwelt upon this point the more because, since the time—some forty years ago—when M. Coste first popularized the notion of fish culture, the idea became prevalent that you only had to carry out artificial impregnation, or the collection of spat in the case of Oysters, and the thing was done. He need not say what disappointment those who first experimented in the matter of Oyster culture were destined to undergo; that was a matter recorded not only in the minds but the pockets of a large number of persons. The same considerations applied to all forms of fish culture, and unless those who undertook it were prepared to work at it with that happy combination of science and practice which was exemplified in the case of Sir James Maitland, disappointment would await their efforts, as it had those of many persons who had attempted the same process. For himself, he did not take very rosy views of the value of protection pure and simple for sea fisheries, but perhaps he was all the more inclined to attach especial value to thoroughly well considered and scientific fish culture. He was inclined to think that it was in this direction we must look, and not to measures of inefficient protection, for the ultimate preservation of our fisheries. This was not the time to discuss the point, but he gathered from Mr. Wilmot's remarks that there was some extremely wicked person who had been saying that protection was of no use in Salmon fisheries; that people should be allowed to destroy anything and everything they liked; but anybody who heard the remarks he had ventured to offer at the first Conference would be aware that he, at any rate, was not one of those wicked persons. No one had insisted more strenuously than he had done on the absolute necessity for the most careful protection for those sea fisheries in which protection could be shown to be efficient, and if any one were prepared to show that measures of protection as efficient as those which were adopted in the Salmon fisheries, and which must be enforced unless the Salmon fishes were to be destroyed, would be equally efficient in the case of any of the sea fisheries, by all means let them be adopted, and no one would be a stronger advocate for protection than he should be; but, until it was made clear that the regulations were efficient, that you were really doing something for the fishery, and not

burdening the fishermen with useless and vexatious regulations, it would be better to leave the question of protecting sea fisheries alone.

Professor G. Brown Goode (U.S. Commissioner) said he should be pleased to give a few figures illustrating what fish culture could do. Professor Baird (U.S. Commissioner) informed him that the Sacramento River, California, was, owing to the large number of canneries there, to a large extent depleted of its Salmon; but by the establishment of a hatchery there he had turned out something like sixty-seven millions of eggs or young fry of the Californian Salmon in the past eight or nine years, one-fourth of which were put into the Sacramento River, and it was now much more productive than ever before. On the Clacamass, in Oregon, a similar experiment was tried some years ago with a like result. These experiments had clearly shown that the Salmon industry of the Pacific Coast, which was now producing fish to the value of something like three million dollars a day, was thoroughly under the control of fish culture. He might also take the case of the Connecticut, in the last century, which was one of the most productive rivers; but by the construction of a great dam, 60 miles above its mouth, the Salmon were cut off from the spawning ground, and for very nearly ninety years not a Salmon was seen. In 1866, or thereabouts, the Commissioners of Connecticut began to plant Salmon in this river, and four years afterwards they began to appear. In the first year 500 fine Salmon, of 15 lbs. to 20 lbs. each, were taken; in the following year almost an equal number. Since that the Commissioners of the States have discontinued Salmon culture in that river, the supply has again fallen off, and the river might now be considered practically deprived of its Salmon again. He simply wished to add a word in confirmation of what Sir James Maitland had said concerning American Bass. Although he did not like to say anything against a fish which was a countryman of his own, he thought it was a fish which interested only the private individuals who were able and willing to feed him, and were willing to pay any sum for the gratification they found in angling. So far as fish with which public fish culturists should deal, the Black Bass had no claims whatever, unless they put him into the same stream with Pike, and let them fight it out together.

(TO BE CONTINUED.)