"FLYING" FISH

IN the western Atlantic, the Caribbean and the eastern Pacific I have observed flying fish with the help of Zeiss 7×50 binoculars from bridge heights of 30 feet and 68 feet. My observations are:

The fish fly very close to and parallel to the water surface. Sometimes they fly aboard gangways 3 feet above the water and rarely in heavy weather fly aboard a deck 12 feet high.

Flights are ordinarily straight, but one or two changes of ten or twenty degrees may occur.

Flights are ordinarily away from the ship or away from the fish, which are sometimes seen to leap from the water in chase of them.

The speed of flight apparently is uniform.

Flights are made in calm or moderately rough weather, though in the latter case flight sometimes seemed prematurely ended by collision with a wave in the way.

Actual emergence from the surface was rarely seen.

The parallel rows of double dots observed by Mr. Troxell[1] have been seen occasionally but not accompanying every flight.

Single flights were sometimes as short as a few yards, rarely as long as 150 yards.

Occasionally, especially when chased, the fish will make contact with the water with the lower part of its tail and by rapid sculling gain speed for further sustaining flight. This has been observed from a line of sight normal to the flight and was clearly seen as a bending downward of the tail to immerse the lower tip in the water, while the body kept its normal flying angle approximately parallel to the water. Viewed from behind and above, the sculling trace in the water is a beautiful sine curve whose amplitude to one side of the median is about equal to 180 degrees of the cycle. The trace may be from a yard to ten yards long.

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"FLYING" SALMON

ANENT "Again Flying Fishes."[1] Comparative vology may give light. The gurnard family is handy in movements. We see some of them walking on the floor of aquariums, but when a flying gurnard has not secured enough momentum and velocity for a flat trajectory over waves we see it descending and submerging the caudal fin only for a fresh start instead of using the pectorals as a bird would do. I photographed a series of salmon "flying" as much as eighteen feet in the air when surmounting a fall in the White Bear River in Labrador. They employed the pectoral fins as well as the caudal for progression and balancing in air as well as when in water. I have suggested to a friend that he take such pictures with his moving picture camera. These may be taken at a few yards distance instead of at a disappearing distance first.

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QUOTATIONS

LORD NUFFIELD'S NEW GIFTS TO OXFORD

AN Oxford that had made up its mind not to be surprised by Lord Nuffield's almost daily giving to hospitals and other institutions was agreeably staggered last week to learn that the university had been offered by him approximately £1,300,000 for three important purposes. The first of these is the erection and endowment of wards in connection with the Radcliffe Infirmary and the other hospitals associated with the School of Medicine, particularly the wards for the special use of the new Nuffield professors. The sum promised for this is £200,000, so that Lord Nuffield's endowment of the medical school within the past twelve months amounts to the munificent sum of £2,200,000. The second is the erection of the new laboratory of physical chemistry on a site between the Organic Chemistry Laboratory and the Department of Pathology in South Parks Road. For this a sum up to £100,000 is promised. The third and, to the general public, the most interesting, is the founding and endowment of a new college for post-graduate work in social studies, to be erected near Worcester College on the canal wharf that lies below St. Peter's Hall. For this, Lord Nuffield has given the valuable site itself, and a sum of about £900,000, about £250,000 of which will be required for the buildings.

The Oxford appeal launched last February aimed at £500,000 for definite and immediate needs, and a further £500,000 for the endowment of new developments in any subject that looks promising. It has now reached the sum of £423,000. As the physical chemistry laboratory is one of the immediate needs, this sum now becomes £523,000, and so as regards these needs the appeal has been successful. The first major step in the ordered development of the science area in the Parks has accordingly been taken—to proceed with the erection of the new physics laboratory for Professor F. A. Lindemann at a cost of about £80,000; and soon will follow the second, for which already provisional plans have been prepared—the erection and equipment of the university's first laboratory for physical chemistry with the sum given by Lord Nuffield, and the sums earmarked for it in the appeal fund.

[1] SCIENCE, 86: 2225, 177, August 20, 1937.

[1] SCIENCE, August 20, 1937.