

*Pseudorca crassidens* (Owen) on the Glamorgan Coast

DURING the night of Sunday, May 6, a school of cetaceans was stranded at Whiteford Sands, Llanmadog, on the Gower coast of Glamorgan. We visited the spot as soon as possible and found twenty-one specimens, which we identified as False Killers, *Pseudorca crassidens* (Owen). Mr. M. A. C. Hinton, who has examined one of the skulls, agrees with the identification. It was possible to make a more or less detailed examination of these and to procure some material for this Museum; another specimen, which was not reported to us until later, was some distance away and we did not have an opportunity of examining it.



[Photo: *Western Mail and Echo, Ltd.*

FIG. 1. False killer dolphins stranded on Glamorgan coast on May 6, 1934.

It will be remembered that this dolphin was by many considered to be one of the rarest of cetaceans, "on the verge of extinction", until October 1927, when a school of about 130 was stranded in the Dornoch Firth. In December 1928 a still larger school was reported from the South African coast, near Cape Town, and another school from Velanai Island, near Kayts, in Ceylon, in August 1929. Sir Sidney Harmer, in a letter to these columns<sup>1</sup>, gave a summary of occurrences of this species and suggested that its supposed rarity was due to its being an inhabitant of the open seas and thus seldom observed in the neighbourhood of land.

A certain amount of data of biological interest has been obtained about the Llanmadog specimens, and it is hoped to publish this in due course.

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<sup>1</sup> NATURE, 127, 60, Jan. 10, 1931.

### Meteorology and Gliding

IN a letter to NATURE of May 5, Mr. G. E. Collins asks whether a sensitive thermometer would be useful on a sailplane for detecting rising air, and desires indications as to how sailplane pilots can assist the science of meteorology.

To make satisfactory measurements of temperature and humidity inside and outside clouds by carrying a meteorograph on an aeroplane is difficult, because the instruments at present made are not nearly rapid enough in their responses to record features lasting about a second; and in Germany they have developed a scheme whereby the more slowly moving sailplane carries the self-recording apparatus and is towed by an aeroplane to the region where observations are required, because the demands for rapidity in the meteorograph will then be less severe.

In the absence of a special institution devoted to these purposes, measurements of the variations of temperature and humidity are difficult; but information of value to the gliding movement as well as to meteorology could be got by systematic measurements, or careful estimates, of the vertical air movements in the neighbourhood of clouds of the different types, especially if the type were defined by the use of a camera. Thus on March 18, the day when Mr. Miles, Mr. Collins and Mr. Humphries all made long flights, some of the verbal descriptions that I heard indicated line-squalls; but the photographs and the account given in the *Sailplane and Glider* of April show, I think conclusively, that the clouds belonged in general either to the type that has been classed as 'longitudinal' or to the 'rectangular' type. The photograph on p. 52 of that issue, which illustrates the 'streets of clouds' utilised by the pilots, shows very clearly the spiral form that is characteristic of longitudinal cells: it suggests also that the maximum lift would not be immediately under the axis of the spiral.

My impression, derived solely from theoretical considerations, is that under such clouds the up-currents would not usually be strong; but the formation of soft hail and the shapes in the photographs indicate that on that day the ascent was fairly rapid—in fact, some at least of the clouds were approximating to cumulo-nimbus. It will be interesting to see whether the development of convection in these types is stronger in summer than in spring.

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### Molecular Weights of Celluloses

DURING recent years a good deal of attention has been given to the investigation of the molecular weight of 'native' cellulose, but the results are highly discordant, the values most frequently quoted being those of Mark<sup>1</sup> (about 30,000, on the basis of micell length by X-ray analysis and other data), Stamm<sup>2</sup> (40,000, by sedimentation equilibrium in the ultracentrifuge) and Staudinger<sup>3</sup> (about 120,000 by extrapolation of viscosity vs. molecular weight data). The sedimentation equilibrium method is the soundest theoretically, and we have recently demonstrated experimentally<sup>4</sup> that it gives correct molecular weight values for long-chain molecules which, like cellulose, give highly viscous solutions.