

the eye during the dive. In fact, it may also protect the eye while the bird is flying, for if you blow sharply into a Gannet's eye the membrane comes across at once. It is quite insensitive; if you touch the eye with your finger, the membrane comes across between your finger and the eye and the bird appears to suffer no discomfort while the finger is there. There is a widely-held belief that a Gannet eventually goes blind as a result of its diving and then dies of starvation. I am certain that this is not the case.

If there are plenty of fish the Gannet dives again as soon as it is airborne with a slanting dive from a height of a few feet. The sight of a diving Gannet attracts others and soon there may be hundreds diving in a small area. The fact that they never seem to hit each other indicates that the dive is well-controlled.

Gannets have been watched swimming with the wings below the surface, but remembering the small size of their wing-muscles and the length of their wings it seems unlikely that they can do very much in this way. There are fantastic tales of Gannets having been caught in nets at a depth of 180 feet but it is unlikely that they penetrate further than about 20 feet. This is a reasonable estimate in view of the fact that the duration of the dive is less than 10 seconds and usually about 5 seconds.

There is evidence that as soon as the bird has penetrated a little way below the surface it turns and shoots along more or less horizontally, taking the fish from below as it rises towards the surface.

I firmly believe that the shock wave caused by the impact of the bird on the water may well stun a fish just below the surface. Water is virtually incompressible and transmits shocks in a remarkable way, as can be vouched for by anyone who has seen fish floating up over a wide area after the explosion of a depth-charge. I have personally stunned and caught an 11-lb pike by hitting the water above its head with an oar (and there were witnesses!) A friend of mine tells me that he once caught a stunned fish which floated up after someone had made a flat dive into a river. The fish was a large trout and my friend is a person of unimpeachable veracity. If the splash and thump is anything to go by, the shock of a Gannet's dive must be pretty intense. It would be an interesting problem to try to work out how far a fish must be from

a diving Gannet to avoid being stunned. Knowing the kinetic energy of the bird before impact, allowing so much of this energy to be transferred to the shock-wave, knowing the amount of energy released by a depth-charge, assuming shock-waves to obey the inverse-square law, and knowing that depthcharges kill fish over a radius of about 300-400 yards, my guess is about 6 feet.

The Gannet's dive is instinctive and it plunges down as soon as it sees the slightest glint of a fish below. This leads it into some embarrassing situations. At Penzance a Gannet noticed some pilchards spread out in a cellar as it passed over a fish-curing shed. It dived down on them with such force that its beak penetrated through the board they were on. A similar incident is said to have happened at Whitby.

Gannets have dived into small boats, having caught sight of fish on the bottom. In one case one is said to have gone halfway through the bottom and there stuck. Gannets frequently get entangled in fishing nets, having caught sight of the fish in them. Thompson mentions in the Natural History of Ireland that 128 Gannets were caught and drowned in one train of nets.

Some times a Gannet dives on too large a fish with disastrous results: a large Black Marlin caught in January 1941, near the Galapagos Island, had part of a Gannet's beak about 4 in. long imbedded in its back. Recently off the coast of West Africa, where the immature Gannets spend much of their first few years, a one-year-old Gannet dived and was promptly swallowed by a Weak-fish. Not so weak perhaps—but it was asphyxiated in its efforts to swallow its unusual meal.

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## PGC OPEN HOUSE

by GEORGE A. ROWLEY

The Philadelphia Glider Council Open House Week was held July 8 to 17. The week was one of accomplishments rather than numbers.

The first day, Sunday, July 8th, brought with it high and gusty winds, tending to make flying a job of work rather than pleasure. Trying to avoid the work of flying, we went to work on the new club house. Protected from the wind by the trees and hangar, the boys got down to brass tacks, or should we say steel bolts, and before the sun had set we had four walls standing, waiting for a roof.

The roof gave way to the urge to soar, as the weather improved, and during the ensuing week several very good flights were turned in by John Jednacz, Art Millay, Ben Cohen, Len Hull, Roscoe Christman, and visitors. Ralph Todd and Del Miller. These flights ranged from one and a half to three hours duration, and while all started and ended at our field they reached as far as twenty miles distant, and some traversed our triangular course that measures 20.7 air miles.

Our greatest achievement came on July 12th when Messrs. Kress and McCausland of the C.A.A. put eight prospective pilots through their Private test. These eight were Leonard Chen, Phil Edgerton, Gene Gray, Paul Hendricks, Otto Hoefner, Frank Lawrence, our air queen, Jane Jednacz, and George Rowley. All eight passed. We claim a record, do we get it?

Among our visitors were soaring luminaries Del Miller and Bob Smith.

Nine members spent an entertaining three hours on a visit to the Naval Air Station at Willow Grove. This visit arranged by Paul Hendricks, provided us with lectures on Meteorology, and the care, use, and packing of the parachute which were very interesting and educational. We were also given the chance to examine the P-2V Neptune Bomber and several of the latest jet types.

Picnics and a Spaghetti Supper put a nice edge to an enjoyable week, and we are already looking forward to next year, when we hope to be seeing YOU.

P.S. We got the roof on the club house.