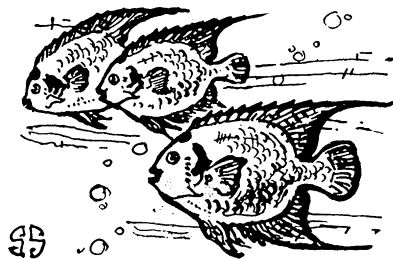

NATURE RAMBLINGS

By FRANK THONE



Angel-Fish

The calm, warm water over the coral reefs that shelter tropical atolls and lagoons must be for the creatures that can breathe it a fair equivalent of the calm, warm, languorous air that washes over the islands above. These isles of the southern seas are as near as the fallen sons of Adam shall ever see of the earthly paradise. At least, so say novelists, writers of steamship circulars, and other romancers.

For aught we know, they may be telling the truth. One may be excused, perhaps, for preferring to substitute tropical birds for dusky but often overstuffed maidens, in the role of angels in this paradise. And for the twin paradise beneath the surface of the mirrored waters, need we seek beyond the angel-fish?

An angel-fish is just as useless as a humming-bird or a trogon—and just as much of an unceasing delight to look upon. School after school of them will flash beside your boat, or even better, before your diving helmet if you go down to visit them. They are not swift swimmers, but the deliberate grace of their movements makes you ready to believe the fine old legends of angels that dance on the clouds or among the stars.

There are many species of them, far more than the traditional seven choirs of angels allowed by Hebrew and Christian theology. Though their body-shapes all follow more or less the same pattern, their color designs are varied and striking. Some of them are so daring and different that one might well imagine the Creator as throwing down a thoroughly discomfiting challenge to even the most modern of artists and designers.

Science News-Letter, November 16, 1929

Guggenheim Contest Entries—Continued

other. In flight, as a high angle of attack is reached, the air forces upon the forward part of the wing are such as to displace the small wing forward, leaving an opening between it and the main wing through which the flow of air is actuated. Then being connected with the flap, the forward opening of the slot airfoil automatically moves the flap in a downward direction, increasing the camber and the effectual angle of attack.

The application of this slot and flap changes the lift factor of the whole wing to an extent which permits of its being flown at a very much greater angle of attack than with ordinary wings, and a greater lifting force is developed.

The airplane is equipped with wheel brakes, which appear to be a necessity to cope with the short landing requirements. It would hardly call for comment if they were upon an American machine, but the use of wheel brakes upon British planes is only now becoming standard.

The preliminary performances of the Handley Page entry have demonstrated that it must be considered a very serious contender in the competition, and the results of the actual tests will be most interesting not alone to the aeronautical industry, but to the public as well.

Curtiss "Tanager"

The "Tanager," which has arrived at Mitchel Field to fly in the Daniel Guggenheim Safe Aircraft Competition, is the Curtiss entry and was constructed at Garden City, Long Island.

Prior to its submission it was tested by the Curtiss test pilot, Paul Boyd, whose terse comment upon its performance is: "We believe that it will meet the requirements of the competition."

The airplane is of cabin type, carrying a pilot and passenger in tandem within the enclosure. It is a rather large biplane, equipped with the Curtiss "Challenger" engine, the engine which recently carried O'Brien and Jackson to the world's endurance record.

The wings are equipped with a modification of the Handley Page slot. In addition, flaps, the hinged rear portion of the wings, are independently and manually operated, allowing their position to be fixed by means of a chain gear in any position at the will of the pilot.

The landing gear is the familiar combination of rubber in compression,

and a long travel oleo gear which permits of a landing gear travel of more than one foot. It is, of course, equipped with wheel brakes operated by individual pedal gear.

An interesting innovation in its landing gear design is that the travel of the shock absorbers is restricted in taking off in order to assure the landing gear's leaving the ground in the shortest possible distance, rather than trailing along the ground due to extension as the load is reduced. The gear is placed in full action before landing in order that the full use of the shock absorber may be had.

A most unusual and interesting feature is the full floating ailerons. These are of the wing tip design, similar in many ways to the old Curtiss interplane ailerons which were placed, in that earlier case, between the wings, but which in this particular application, are placed at the tips of the lower wings. These are floating, and in the free position, trail at a zero angle with the relative wind. They are, however, independently operated in the usual aileron fashion around this trailing position. An aileron control is provided which is entirely independent of the wings, and which, whether the wings might be stalled or not, are never in a stalling condition, though always being displaced from the zero angle of attack position for lateral control. This provides an unusual control at high angles of attack and low speeds.

The fineness of the design and the power of the engine assures a satisfactory high speed performance. The Tanager, whether it wins the competition or not, will be certain to put up a most excellent showing toward the ideal of a safe and simple airplane.

Science News-Letter, November 16, 1929

American mosquito-eating fish are to be introduced into Syria.

There is less than one per cent. of illiteracy in Scandinavia.

It is likely that dogs suffer more from decayed teeth than men do.

The ancient Egyptians first acquired silver and iron from the Hittites.

The mountain beaver of the Pacific coast is not a true beaver, and resembles in size and appearance a tailless muskrat.