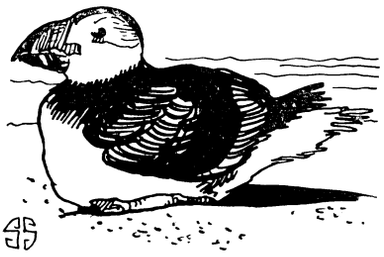
ORNITHOLOGY

NATURE RAMBLINGS *by Frank Thone*



Puffin

WE LOOK for bright harlequin birds in the branches of tropical trees: parrots and macaws and toucans and trogans. Our northern woods have nothing like them. But northern waters have. Rocky shores overlooking the chillier seas all the way around the world are always festooned with rows and rows of strikingly marked birds. As a rule they do not go in for color contrasts, but achieve much the same effects by striking patterns in blacks and browns and whites, sometimes with a decorative touch or two of bright color on beak or head.

The puffin furnishes a striking example. So strong is the suggestion of the tropics that clings about this little bird of the northern shores that sailor-folk the world over have given it the nickname of "sea parrot." Their habits are all different, but their trick of standing upright on their toes, so stiffly that they seem to be standing on their tails, of walking in comic dignity on imaginary errands of preternaturally grave import, of sticking their funny stubs of tails up over their backs when they swim, all conjure up in the mind of the watcher the same reactions that come from observing the equally solemn, equally comic antics of parrots.

Puffins must strike everybody in much the same way. Everybody agrees that "puffin" is the right name for a puffin, just as "muffin" is the right name for a muffin. "Tammie-Norie" is an affectionate nickname that may mean something special in the particular Celtic corner where it originated, but probably doesn't. But the best of all is the Latin name Linnaeus used: *Fratercula arctica* —"little brother of the North." Therein the great Carolus proved himself a worthy kinsman of St. Francis.

Science News Letter, June 25, 1932

ENGINEERING

Tests Show Effect of Crowds On Grandstand Framework

TESTS upon a steel apparatus, similar in principle to the old-fashioned lawnswing, have shown for the first time how strong a grandstand must be to withstand horizontal forces such as those produced by a crowd of rabid baseball fans. Failures in grandstands occupied by baseball spectators and other sports crowds have resulted in both death and injury, and recent structures have been built without the benefit of reliable data.

Grandstands constructed to take care of a horizontal force of 24 pounds per linear foot of seats or 13 pounds per square foot of stand are held to be well within the limit of safety. These forces are considered applied to the structures supporting the seats at about the level of the seats and in a direction parallel to them.

Cheers Strain Stands

Previous investigations have shown that great stresses are produced by sports crowds which at times during a contest cheer or sway in surprising unison. When Babe Ruth slams one against the centerfield fence and the roaring fans rise up as one man, the stands should be able to hold up against a force of nine pounds per linear foot of seats or five pounds per square foot of stand to be amply secure. In this instance the forces are applied to the supporting structures in a direction at right angles to the rows of seats.

The tests to obtain these results were conducted in Wayne, Pa., by the Wayne Iron Works in coöperation with the American Standards Association. They were expected to show what would be the maximum forces a grandstand would be expected to meet.

Men and Model Used

In making the tests, a steel platform six feet square was used. The platform was suspended from overhead beams by rods attached to each corner. It could swing in one direction only. Upon the platform was erected a standard three-row portable steel grandstand four feet long. A large adjustable screw, placed near one end of the platform, controlled the amplitude of the platform's swing.

The stand was occupied by men who were urged to exert their full strength in unison in producing the maximum possible horizontal force in a direction away from the screw. Measurement of the displacement of parts of the apparatus, and mathematical computation resulted in the desired figures.

More lateral force was found to be developed by men in a sitting position than when standing. Greater forces were produced by three men than by nine, a capacity number for the small grandstand used in the experiments. The tests, conducted at the instigation of the Pennsylvania Department of Labor and Industry, included those in which the men were standing or sitting, holding or not holding with their hands, and suddenly rising and sitting down again.

Science News Letter, June 25, 1932

Children gain weight faster in autumn and winter, and gain height chiefly in spring and early summer.

Prof. Robert West, of the University of Wisconsin says: "About 85 per cent. of the 1,000,000 stutterers and other speech defectives in the public schools of the United States could have their speech difficulties corrected in school."