productive of plant life or invertebrates. Some of the bays are shallow but support little aquatic vegetation, this chiefly *Potamogeton perfoliatus*. Only one stand of tules was observed, a sparse growth on a submerged reef close to the west shore measuring approximately 10 by 150 feet. Two kinds of molluscs were collected.

Local residents report the presence of the following fishes: Kamloops trout, lake char, ling, squawfish and two species of sucker. Remains of lake shiners were found in gull pellets.

Fifteen pairs of gulls were nesting on Stack Rocks, an island of gray and white granitic rock situated some 250 yards from the east shore of the lake. Except for one small clump of sedge this island was bare of vegetation, and it is the only one of its kind in the lake. The measurements, at the water level obtaining on July 26, 1933, were 65 feet by 30 feet. The height at the highest point was 6 feet.

As I approached the island all the adult gulls flew out and circled over the advancing boat, so that it was a simple matter to make an exact count. As the boat drew nearer to the island the young birds, numbering twelve, swam out from the rocks. These twelve young birds, apparently all that had survived, were one-quarter to one-half grown. An adult female and a half-grown female were collected and preserved. The former is in worn plumage, the white tips to the primaries largely disintegrated.

The nests, of which twigs formed the chief constituent, had been built in rock crevices, and all but one had degenerated to shapeless masses of débris mixed with an accumulation of fish-bones and other litter. The nest which had remained intact was well made of twigs, chiefly spruce, lined with moss.

On May 15, 1934, the island was visited by Mr. F. M. Bell, a local rancher, who informed me that on that date there were fifteen nests, six with three eggs each, six with one egg each, and three empty. Mr. Bell counted thirty-three gulls. He mentions also that the first gull for the season was seen on April 15 and that the ice went out of Bridge Lake on April 26.

In order to learn something of the food habits of this colony the island was searched carefully for pellets and other food remains, with rather meager results. A number of fish skulls and vertebrae were identified as belonging to suckers. These and four regurgitated pellets were the only materials collected. One pellet contained bones and abraded feathers of a passerine bird; two contained bones, including pharyngeal teeth of lake shiner (*Richardsonius balteatus*), together with fragments of moss and vegetable débris; one contained abdominal segments and other hard parts of *Dytiscus* larvae representing at least eleven individuals.

Acknowledgment is made to Professor J. R. Dymond, Royal Ontario Museum of Zoology, Toronto, Ontario, for determination of large fish bones, and to Dr. W. A. Clemens, Director of the Pacific Biological Station, Nanaimo, British Columbia, for cooperation in the study of material composing regurgitated pellets.—J. A. MUNRO, *Okanagan Landing, B. C., Canada, August 14, 1934.*

A New Name for the Large-billed Hawk of Western Costa Rica and Panama.—Transfer of the tropical American hawks formerly included in the genus *Rupornis* to the genus *Buteo* (Peters, Birds of the World, 1, 1931, p. 228, and van Rossem, Bull. Mus. Comp. Zoöl., 77, Dec., 1934, p. 429) makes necessary a new name for *Buteo magnirostris ruficauda* (Sclater and Salvin) [*Asturina ruficauda* Sclater and Salvin, Proc. Zoöl. Soc., 1869, p. 133]. The subspecific name is preoccupied by *Accipiter ruficaudus* Vieillot (Ois. d'Amér. Sept., 1, 1807, pl. 14), a synonym of *Buteo borealis borealis* (Gmelin). I therefore propose as a substitute: *Buteo magnirostris petulans*, nom. nov.—A. J. VAN ROSSEM, *San Diego Society of Natural History, San Diego, California, April 3, 1935.*

Variability in Size of Gulls.—Gulls are notoriously variable in size. This is particularly true of the larger and especially of the more maritime species. The Glaucous Gull shows it in extreme measure, but it is also strongly evident in the Herring, Glaucous-winged, Black-backed and others. It is less marked in the smaller inland and land-feeding species such as the Bonaparte and Franklin gulls.

It seems reasonable to suppose that this great difference in size of individuals of certain species may be largely due to, or emphasized by, variations in food supply

during early or adolescent stages of growth. Marine gulls, scavengers, beach-combers and surface feeders, are particularly dependent on weather conditions, especially wind, in their food gathering. During stormy weather surface life descends to greater depths and heavy surf beaten shores do not make good gleaning grounds. Gulls often show great concentrations and high excitement over surface water disturbances such as tide rips and heavy surf, yet it is doubtful if effort under such circumstances is always as profitable as over quieter waters.

If during a critical period of growth of nestlings an insufficiency of food prevails, the chicks may well receive a check to development for which no subsequent abundance will compensate. This seems true of live-stock and there is no reason to suppose that it would not be true of gulls. Nesting seasons are often unpropitious. Successions of bad weather lasting several days may follow one another and spells of a week or more of wind and storm are not unusual at such seasons. These occurrences must often cover most of the nest life of gull chicks, involve their most critical growing period just as they are ripening off into maturity, and produce a number of undersized adults.

Such under-development might not be equally marked in all of a numerous brood. Parent birds do not usually apportion food to their neediest offspring. They usually either dump it down for the young to fight over or else give it to the most vigorously insistent. In either case, in times of food shortage, the strongest and most aggressive are likely to get more than their fair share and the weaker ones less or even nothing. The general rule of the nest is that the strongest gets all it wants while the others snatch what they can. If anything remains after the strongest is satisfied the next strongest gets its innings and so on down the line. If there is not enough to go around the weakest goes without. Thus progressively the strong become stronger and the weak weaker; the former tend toward complete prosperity, the latter toward extinction. The final result, probably, is to raise to maturity birds that have been stopped in various stages of development and, though perfectly vigorous through subsequent ample nourishment, showing considerable range in size as between birds of the same brood.

However repugnant this system may be to our sensibilities, it is good practical natural selection, producing the largest number of strong offspring possible relative to the food supply, instead of none at all, or instead of a larger number of weaklings. —P. A. TAVERNER, *National Museum of Canada, Ottawa, January 10, 1935.*

Efficiency of Nesting of the Tree Swallow.—At my home near Fortine, Montana, bird houses which I have erected are occupied yearly by from eight to sixteen pairs of nesting Tree Swallows (*Iridoprocne bicolor*). For eight seasons I have kept more or less complete records of their nesting activities. In the case of sixty nests a full record has been obtained of the percentage of hatch and survival of the nestlings. The efficiency of propagation shown by the Tree Swallows in these representative nestings is shown below.

	First brood nests	Second brood nests
Nests with eggs	52	8
Eggs laid	324	39
Eggs hatched	319	39
Eggs failed to hatch	4	0
Eggs disappeared	1	0
Nestlings died	0	6
Nestlings taken by a Sparrow Hawk	12	0
Nestlings successfully raised	307	33
Nests that were 100 percent successful	44	6
Percentage of complete survival	94.7	84.6

Death of the six nestlings of two second broods was evidently caused by parasites. Hot weather does not seem to affect the nestlings adversely. Though raised in exposed wooden houses, the other six late broods of young survived temperatures as high as 97° in the shade.

Every year at least one pair of Eastern Sparrow Hawks (*Falco sparverius sparverius*) nests within a few hundred yards of our farmstead where the Tree Swallow houses are located. As a rule the hawks do not molest the swallows; but in 1931 the male bird of a pair of Sparrow Hawks that nested near-by acquired the habit of taking nestling Tree Swallows from the houses by reaching through the