BANDING AND POPULATION CONTROL STUDIES ON GULLS AT POPSQUASH ISLAND, VERMONT

By Bruce Adams

In the Jan.-Feb. 1964 issue of EBBA News I wrote an article entitled "Popsquash - The Crowded Island", which referred to the small island in Lake Champlain in northern Vermont where I have been banding Ring-billed Gulls and Common Terns for many years. Incidentally, in that article I erroneously referred to Popsquash as being in St. Albans Bay; actually it is in Maquam Bay, more to the north of St. Albans.

Since then, with the exception of 1965, I have made annual visits to the island, or even two visits when possible. With a total of ten years of banding I have now banded 1078 Ring-billed Gulls and 300 Common Terns. The most interesting feature of this banding has been the changes in population that have continued to take place. As I mentioned in the previous article, over the last decade the gulls seem to have forced out the terns through their increasing numbers and domination of the small area. My past conclusions about this, however, were somewhat influenced by the fact that I had been making only one trip per year, and that one trip was always during the best time for gulls, that is, the first or second week in June. In 1967 and 1968 I was able to make two trips, one in early June and a second several weeks later. On these second trips, I found many terns and was able to band 34 in 1967 (July 4) and 131 in 1968 (June 30).

The latest approach to the gull and tern population situation in Lake Champlain has been an experimental gull population control program through the use of chemosterilization, which has been under the direction

The author and Crystal Perrier banding a young Ring-billed Gull at Popsquash. The Vermont mainland can be seen in the distance.

of Dr. David K. Wetherbee of the University of Massachusetts College of Agriculture. This research has been conducted with the cooperation and assistance of the Bureau of Sport Fisheries and Wildlife, the Vermont Dept. of Fish and Game, and the Vermont Audubon Society.

For many years, it had been evident to bird watchers and officials of the Vermont Fish and Game Dept. that the Common Tern was in serious danger of disappearing completely from the Lake Champlain area unless measures were taken. In addition to Popsquash, terns have also attempted to nest on Rock Island in St. Albans Bay, which I have never been able to visit. On Rock Island the terns have run into human interference over the years as many more people visit there than at Popsquash. Mr. Robert N. Spear, who represented the Vermont Audubon Society in the study of terns in Vermont, stated in a report to Dr. Wetherbee that "the tern population in Vermont is in a rapid state of decline and will probably disappear within the next few years unless assistance is given. The cause is two-fold - human interference and gull expansion". In addition to the question of the future of the terns, there has also been some concern at local airports about the increasing numbers of gulls on runways.

In the course of their research and experimentation, Dr. Wetherbee and his associates have used three drugs, some of which had been tried earlier on gulls at Muskeget Island, Mass., and on different species in captivity. These drugs are:-

1. Mestranol: a drug capable of causing infertility in birds who injest it as nestlings. It is necessary to capture young birds at a colony and force-feed the drug to them; they must then be recaptured and examined in future years to determine if the drug has been effective.

2. Sudan Black: an embryocide which must be fed to the birds by being injected into a suitable bait such as fish or minnows. An indication of the effectiveness of the drug is to break open and examine eggs to determine the presence of Sudan Black dye in the yolks.

3. SC-12937: an anti-ovulant also fed to the gulls through bait. A still unknown factor in the use of this drug is to what extent it stops ovulation altogether, or simply delays it by a week or two.

In 1967 and 1968 Dr. Wetherbee and his associates treated several hundred gulls on the Four Brothers Islands with mestranol. It is still too early to evaluate properly the results of this experimentation, but future examination of recaptured birds should provide some information.

At Popsquash in 1968 Dr. Wetherbee tried the drug SC-12937, which was put out in capsules inserted into thawed golden shiners. This was done a few weeks before my first banding visit, on June 8. Normally, the first and second weeks of June are best for banding the gulls, but on

this trip I found no gulls hatched, and a definite decrease in numbers of gulls' eggs. With more room to nest, there seemed to be a slight increase in terns; they were nesting on both the northern and southern tips of the island instead of only the southern tip, as had been the case in previous years. Many terns had already hatched and three were big enough to be banded. On my second trip that year, June 30, I banded 128 terns and 39 gulls. This was my smallest gull total since 1960 and the largest tern total since 1958, when Normand St. Jacques banded 220.

The experimentation with SC-12937 in 1968 certainly had some effect upon the population of Ring-billed Gulls at Popsquash, although it is still uncertain whether what took place was (a) the treated birds became non-ovulatory, (b) egg laying was simply delayed by a couple of weeks, (c) the original birds were replaced by newcomers; or a combination of all of these. The most important factor was that the terns had a good year and seemed to be on the increase.

Any experimentation of this sort, of course, is always carried out with great care, to avoid any possibility of permanent ecological imbalance. It should be emphasized that this project on Lake Champlain gulls is being carried out under strict scientific supervision and observation, and the objective is not to eliminate the gulls from Lake Champlain, but only to reduce their numbers and do so in a humane way. Some well-meaning persons are opposed to even this limited type of "tampering" with nature, but it should be pointed out that certain species, including gulls, have adapted far better than others to human civilization and have increased in many areas faster than they would under "normal" conditions; while others, such as the larger birds of prey, have decreased. Indeed it could be said that from the standpoint of ecology, there are very few areas left that are in a truly natural, primitive state, untouched by the influence of man. The knowledge gained from both banding and experimentation of this kind can only increase our ability to keep the ecological imbalance at a minimum.

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CORRIGENDA - 1968 BANDING SUMMARY

Page 209, second paragraph of the discussion of the Summary in the last (Sept.-Oct.) issue: the high species count of 119 was reported by John C. Miller, not Russell Rutter. Our apologies to both banders.

No other serious errors have been pointed out to us; a few typographical errors need not be specified - except, our apol gies for the omission of a "p" from Bill Pepper's name!