

AIDS IN TERN BANDING
By T. A. Beckett, III

The author has been greatly surprised to find out how little has been learned by banders over the years of methods available to assist them in the ringing of large numbers of the colonial nesting terns.

It is quite apparent from James Richardson's article, "A Tern-Banding Project", (1964, Vol. 27, No. 1), EBBA News, that Dr. Robertson and his co-workers are having some needless difficulties in the Dry Tortugas with the Sooty Terns (*S. fuscata*). I have visited this colony and believe that the following information will aid all banders in handling large numbers of ground nesting colonial terns.

First, I would like to point out that with the exception of high tides and pesticide kills the mortality is not great among these species in most colonies, once the young are about 10 days old. There is therefore no reason to delay banding until the birds are nearly ready to leave the colony. In fact, the work can be more easily accomplished if the job is undertaken as soon as the tarsus will hold a band.

In most of the species with which I have worked - Royal Tern (*T. maximus*) and Sandwich Tern (*T. sandvicensis*), the tarsus is fully capable of retaining bands at about 5 to 7 days of age. Other advantages of early banding are: the birds are less active, a greater number can be penned safely at one time, banding can be carried on throughout the day, and most important in many cases, is the period of banding can be spread over a much longer period of time. The last is very important in some seasons. Many banders carry out their hobby only on weekends. If the weather happens to be rough so that boating becomes impossible for early season work, then the birds can still be banded on later weekends before they depart from the colony.

If maximum efficiency of time and efforts are to be realized, a minimum of 4 to 5 people should participate in each banding attempt. This is even more important if the flat beach areas are very wide and natural narrow sections of beach do not exist and if the different flocks of young are of different ages and are segregated naturally when work is to begin.

Due to the fact that practically all of the larger terns nesting along the South Atlantic coast nest on islands accessible only by boat, equipment, in most cases, must be kept to a minimum amount. Most frequently a large boat is of little value in actually landing the gear and personnel due to the shallow waters along the beaches.

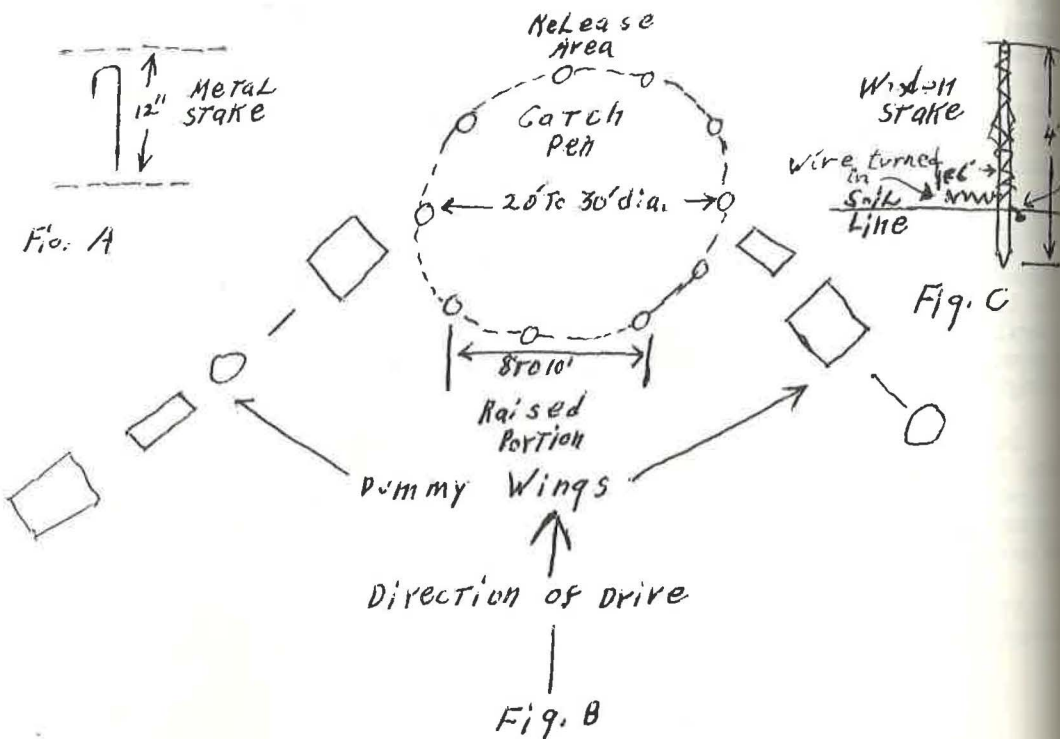
It is possible the following rules might save a life and certainly prevent some near tragic experiences which I have seen and participated in.

1. Plan the trip so that arrival and departure tides will favor the bander.
2. Always beach small boats on back beaches. Do not anchor them out unless in sight at all times.
3. Do not overload small boats. Try to leave wire and stakes at banding site if possible.
4. Wait out a sudden storm. Small, 14 to 16 foot boats cannot take rough water with 4 to 5 people plus gear on board.
5. Have life preservers on board and try to place equipment in water-proof plastic bags.

Materials and Methods

It is quite evident that colonies will vary tremendously in size and ground terrain. Therefore, each colony will actually require certain amendments to any methods one may suggest.

In a small colony consisting of only a few hundred birds a simple method where wire and stakes are not available is to drive the young birds in small groups, 50 to 100, against a steeply sloped section of a washed sandhill, allowing 1 or 2 people to band while the remaining 2 or 3 keep the young herded against the bank. Under no conditions should attempts be made to band many birds by chasing them down.



If, as is usually the case, there are several thousand birds to be banded, a site should be selected above interference of a rising tide, but preferably in firm sand. A site relatively close to the main groups to be banded should be the aim. As long as the catching pen is a reasonable distance from the young, (500 feet), they will not take to the water. A point at which the beach narrows is of assistance.

I prefer 1 inch mesh, 20 gauge, woven wire 3 feet tall for small Terns. Wooden stakes about 4 feet long pointed on one end are inserted at 6 to 8 foot intervals in the meshes of the wire for supports. The circle of the pen may vary according to the length of wire available, but a 20 to 30 foot diameter pen gives good results with 7 to 9 hundred young in each catch. A few bent metal stakes (A) are also of assistance as raised sections of the wire show up along the footing.

A nail is sometimes used in wooden stakes at ground level but is not necessary if enough metal stakes (A) are used. In placing the wooden stakes, by driving the tops, the stakes should slant toward the center of the pen. An attempt should be made to turn 4 to 6 inches of the foot of the wire in (C). The young terns standing on this footing will help hold the wire down and prevent their escape under the wire.

After the pen is assembled and ready for use the wire is slid up the stakes about 15 inches and propped up by sticks for a width of about 8 to 10 feet on the side from which the drive is to take place.

Instead of wings being built on each side, any boxes, gear, or simply bright objects or metal are spaced out on each side to turn the young into the raised footing of the pen (B). If a couple of young are held from the last of each catch in a small wire cage in the center, they will entice the newly arrived group directly into the pen. Once the last chicks are in the wire is slid down the stakes and secured to the ground.

It should be strongly pointed out that it is better to underestimate the size of the group separated from the main flock than to have too many. As the chicks near the pen, an attempt should be made to keep them bunched rather than strung out. One person should be stationed on each side of the "dummy" wings when the chicks are nearly to the pen, but should not go behind the pen. Even while the footing of the entrance wire is being closed one person should continuously keep the chicks from piling up against the wire on the opposite side.

Once the entrance is secured banding can start immediately. If 5 people make up the group, then 4 can band, leaving one person to continuously circle the enclosure to prevent piling of the young birds. If this is done there can be no loss from suffocation. If some of the

penned chicks have been previously banded, this person can remove those he sees. He can also keep the banders supplied with bands, aid young birds crowded among older ones, watch for other species (Sandwich intermixed in the case of Royals), deformed birds, or any characteristic or unusual birds of interest to the group.

It is my habit to open at home the desired number of bands that I plan to use. Each series of 100 bands is kept separate in a plastic drawer, in a cabinet containing 24 drawers. The series are in turn kept in numerical order. If additional bands are needed, they are opened on the spot before the next catch is made. Each bander, while working, has his bands in a sea shell or some container on the sand by him. I am a strong believer in the use of banding pliers. I do not see that the hardness of the band is a factor in closing them, although it is in opening them. With pliers there can be no overlap of bands thereby causing a loss of time in removing them from the bird. The pliers do not retard the operations, and with semi-skilled helpers, significantly speeds things up. With experienced help 600 to 800 birds can be banded by four people in about one-half hour of active banding.

Some further points of help will be of assistance. Workers in the pen should separate, against the wire, small groups of 50 to 90 young and work these as a unit disregarding the remaining birds. If the pen is so situated, the banded chicks should be released over the back side so they will not rejoin the young in the next drive. A low wire keeps the bander from having to rise as each chick is released over the wire when banded. Only an experienced bander should keep bands for any intermixed species. A string of pre-opened bands arranged in numerical order is of assistance when the last of a series is being banded for the day.

If the colony is known to have the very young and old chicks mixed, then 2 inch wire will allow the small chicks to escape rather than being trampled by the larger ones. As a rule, the penned young become less active after a few minutes' enclosure and do not tend to pile up. There is no excuse for the loss of a single bird by piling if this system is used. I have banded over 10,000 Royal Terns and assisted with banding several thousand more without a single loss.

There are two causes for loss: the pen has corners (is not round), and inattention on the part of the "observer herder", allowing the birds to pile. I do not feel that it gets too warm to handle the young in the middle of the day if the bander is careful and is man enough to take it, provided the site is situated so nestlings of other species are not exposed (such as young pelicans).

We have usually carried bands along, when cutting out a group to be penned, to place on the straggler chicks as they fall behind. These are usually younger birds, very fat ones, or young that have just been fed. Birds capable of flight frequently may be penned if they have never

flow before, provided they are not driven too fast toward the catching pen. This is particularly true of the Sandwich Terns mixed in Royal Terns of the same age.

It is always an advantage, if the colony is to be visited again, to band the older young first. If the weather or some other factor will not allow much time for assembling a pen, a few young can be banded by cutting out a small group and driving them into the shallow water. This method is used when an attempt is made to finish a band series. The young are good swimmers but slow.

Another method may be used if only a few birds are to be ringed or no penning equipment is at hand. If there are sizeable clumps of some form of grasses, or large thick weed growths, the young can be driven a reasonable distance (200 yards) before arriving at one of these vegetative patches, where they have a tendency to squat when inside the safety of vegetation. Care must be used so that none of the young will be stepped upon. This method is more satisfactory when the young are still in the large downy stage. Once the young are well feathered they will generally break cover for open water.

There is a great opportunity for observations of many factors when handling young - Royal Terns in particular - if someone is present to make notes in a tabular form. There are many color combinations in the soft parts and down that are lost once the young are feathered. In the case of the Sandwich Tern some of these rare colors of soft parts are not yet recorded in print. It is possible to watch and hear individual chicks respond to the call of hovering parents. Many chicks will be handled several times if banding takes place on several succeeding dates. If time is available, many factors such as rate of growth, feathering and change of coloring, can be recorded. Close observation will usually show several deformed birds - crooked bills, peculiar lumps or growths - and other characteristics that will enable identification and observation without necessarily catching chicks. Almost nothing is in print covering pre-flight stages of most of our Tern species. All worthwhile observations should be recorded for future use in helping to preserve these harmless species that are fast losing out to man in our headlong search for a modern Eutopia.

