

territoriality in birds

PART ONE

by Rae Anderson

Practically every aviculturist has witnessed territoriality in his birds in one or more forms. It may be apparent in:

1. Song displays.
2. Pugnacity of males toward other males of their own species or toward males and females of other species. We often see this as "bullying".
3. The driving of other birds away from the feeding trays.
4. The driving of other birds away from certain roosting areas.
5. The driving of other birds away from the vicinity of nests.

I am firmly convinced that this behavior of aviary-confined birds is the result of their attempted enforcement of natural and instinctive territorial rights.

Most aviculturists keep too many birds in each aviary regardless of aviary size. In addition, we frequently seem to insist upon keeping species together that have conflicting territorial demands. This seems to stem from the chronic aviculturist problem of "never enough aviaries".

Even though we go to great lengths to make our birds comfortable and provide a well-balanced diet, we much too often overlook territoriality. This oversight can and does make birds miserable even though they are in the nicest aviaries. It certainly has very adverse effects on our breeding results and sometimes leads to the untimely death of even adult birds due to bullying, actual fighting, starvation, or exposure.

When we are able to observe these birds in their natural habitat they show us that they make these demands in one way or another. Few of us, however, have the opportunity to observe in the natural state the birds that we keep in our aviaries. Here in North America, for example, the interested observer can gather a host of information on the territorial habits of many highly desirable birds, practically all of which are protected and consequently not found in any of our aviaries. This information could be of considerable benefit to fanciers on other continents. Likewise, few American aviculturists get the benefit of behavioral observation of wild birds in Australia, Asia, Africa, South America and other places where our aviary inhabitants live in the free state.

The modern concept of territoriality in birds appears to have begun with the work of Bernard Altum, a German who in 1868 first stated the territorial theory in considerable detail including the true function of bird song. Altum's work was not widely known, however, and it was not until 1920 when an Englishman, H. Eliot Howard, published his classic work entitled, "Territory in Bird Life" that widespread interest was aroused. Since 1920 there have been many extensive studies which have confirmed the basic theory.

The generally accepted definition of territory as applied to birds is simply "any defended area".

At this point I will describe the observed forms of territorial behavior in birds in their native state in an effort to show reasons for the conflicts in the confines of mixed or colony aviaries.

The theory of territoriality in birds is briefly as follows:

1. Pairs of birds are spaced through the pugnacity of males towards other males of their own species.
2. Song, display of plumage and other signals are a warning to other males and an invitation to females.
3. Males fight primarily for territory and not over mates.
4. The owner of a territory is nearly invincible in his own territory. Conversely, an intruder is nearly always beaten and driven out of the territory of an established male.
5. Birds which fail to obtain a territory form a reserve supply from which replacements come in case of the death of the owners of territories.

A number of different types of territories are recognizable. Breeding territory is one classification. Under this is found:

1. Territory for mating, nesting and feeding the young.
2. Mating and nesting but NOT feeding, such as in the Red-winged Blackbird.
3. Mating area only, such as in the Prairie Chicken.
4. Mating and feeding, but NOT nesting, as in the Annas Hummingbird.
5. Territory restricted to the immediate vicinity of the nest as is found in colonial species such as terns, some swallows, and in solitary species such as in most hawks.

Non-breeding territory is another classification which includes:

1. Feeding.
2. Wintering, such as with the Hermit Thrush and Black-bellied Plover.
3. Roosting, as found with the Starling.

Mating, nesting and feeding territoriality is the classic type described by Altum and Howard. This type of territory is typical of many species among which are the Song, Field, White-crowned and other Sparrows, Wrens, Meadowlarks, Orioles, Mockingbirds, Towhees, Shrikes, Woodpeckers, Kingfishers, and many others.

One of the very extensive and intensive studies of a single species of bird was Margaret Morse Nice's "Studies in the Life History of the Song Sparrow". In this study Miss Nice discovered that male Song Sparrows defended their territories most vigorously during the early part of the breeding season from February to April, but they would drive invading males from their territories until mid-July. At that time the annual molt begins and territorial behavior temporarily ceases.

Territories averaged 3/4 acre in area during the breeding season but males were found to range over areas of 8 to 10 acres in the winter. The female appears to learn the boundaries of her mate's territory and usually accepts them. Females also defended the territory against neighboring pairs.

A male Song Sparrow in his territory sings 5 to 7 songs per minute from a conspicuous perch as an advertisement. When a rival male appears the song frequency increases to 8 to 10 songs per minute and the singer puffs his feathers in a threat display. The intruder is usually silent and if trying to move in on the

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territory of the singing male will follow the singer about and give chase. Finally, a fight results and either the newcomer wins and moves into part of the territory or is beaten and driven out. The encounter usually does not reach the combat stage because the intruder is repelled by the singing and threat display of the owner and leaves the territory without a fight.

Territorial behavior limits the number of Song Sparrows in an area since 3/4 of an acre seems to be the average amount of land required by each pair. Each pair supports itself and its brood of young in its own territory. The principal function of this territory seems to be to insure an adequate supply of food and to insure non-interference in nesting from other members of the same species.

Mating and nesting, but NOT feeding, territories are a variation of the preceding and are seen with Marsh Hawks, Red-winged and Yellow-headed Blackbirds. The Red-winged Blackbird builds its nest in marsh reeds. A territory is defended in the vicinity of the nest where the males sing and display, showing their red epaulets and puffing their feathers in territorial display. The birds join in a flock to feed some distance away from the nesting area.

Mating-station-only territories are seen in the Prairie Chicken, Sharp-tailed Grouse, Sage Hen, some Birds of Paradise, some Hummingbirds, and some Mannikins.

In the Prairie Chicken the males maintain small territories on a communal "booming ground". Here the males fight, display, and "boom". Females come to the "booming ground" where mating takes place. The female selects a nesting site at some other location and performs the entire task of raising the young.

Mating and feeding, but NOT nesting territoriality is readily seen as the male Anna's Hummingbird defends a territory against other hummers and often attacks other species which enter the territory. Within his territory each male perches in conspicuous places, sings and performs his power dive display flights. The female comes to the male's territory, mating occurs, and the female departs to build her nest some distance away.

Territorial rights that are restricted to the immediate vicinity of the nest are seen in many colonial and some solitary species. In colonial species it is evident in Cormorants, Gulls, Terns, Penguins, Herons, and some Swallows. Spacing of nests of these birds is often determined by the distance to which a bird, sitting

on a nest, can reach out and peck at its neighbor. The nest then becomes the territory and is defended. Cliff Swallows defend only the nest and its opening. Brandt's Cormorants perform displays while on the nest and peck at passing birds. This type, in effect, represents a shrinking of the territory in order to obtain the mutual advantages of colonial nesting. This type is often found in species whose nesting requirements are such that few favorable nesting areas are available and which feed in a very different type of habitat from that of the nest site.

In solitary species such as most of the
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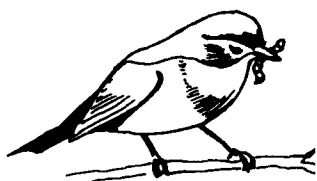
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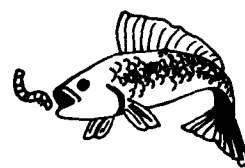
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L.A. PLANNING COMMISSION VOTES NO ON ANIMAL RESTRICTIONS

On November 6, 1975 the Los Angeles City Planning Commission met at the Van Nuys City Hall to deliver their findings after extensive public hearings on whether birds and other animals would be restricted within the city.

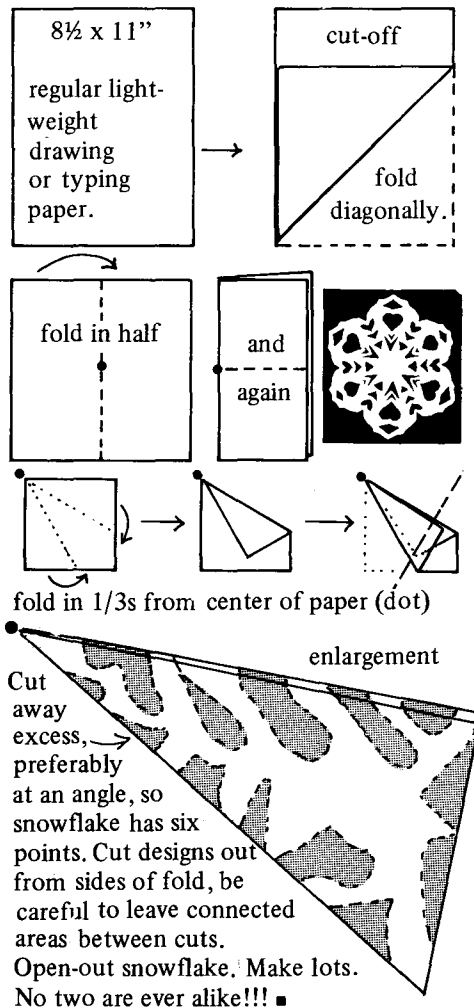
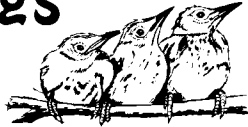
In announcing the Commission's unanimous decision to reject the City Council proposed restrictions Mrs. Suzette Neiman, Commission Vice-president, described the proposal as an outstanding example of bureaucratic overkill and a waste of taxpayers' money. The Commission went on to accept the Department of Animal Regulations recommendation to only limit cattle, and at that, one per 4,000 sq. ft., or ten to an acre — the current limit on horses. The Animal Regulations recommendation received strong support from both the A.F.A. and RURAL (Resident United for Residential Agricultural Lifestyle), a San Fernando Valley Homeowner's association.

The first round victory was well earned by the supporters of A.F.A. and RURAL — the two leading groups in the struggle to preserve animal owner rights. Jerry Jennings, president of both groups, appeared numerous times on radio, television, and in local newspapers publicizing the issue in gaining support for no restrictions. He, along with Dean Thie, Vice-president of RURAL, and others were responsible for the formation of a coalition of twenty animal oriented groups and homeowners associations, which opposed the restrictions.

The Planning Commission's report and recommendation will subsequently be sent to the City Council Planning Committee and then to the full Council. Continued efforts will be made to insure the adoption of the A.F.A. backed Commission findings ■

Fledgling's Corner

by Judy Jennings
SNOWFLAKES



AGAPORNIS ACRES

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bred for depth of color and the greatest contrast between light and dark areas. Another note of interest is that very light Pieds mated to light Pieds over generations have, in many cases, showed a marked decrease in fertility, averaging only two young per nest. This may have nothing to do with the Pied gene and only be the particular strain of bird, but this has occurred in at least three unrelated cases of which I am aware.

In the next issue I will talk about the Black Masked (Agapornis personata). This is certainly the next most widely aviary bred Love Bird. This bird is also very easily bred and is usually a very reliable parent. In recent years some serious problems with the Black Masked have occurred in aviaries throughout the country. These problems and their possible solutions will also be discussed in depth. Also the Black Masked color

mutations and genetics will be discussed.

If any of the readers have had unusual problems or interesting results with the breeding of the African Love Bird, please write and let me know. The more information compiled on these wonderful birds the better our understanding of them.

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TERRITORIALITY IN BIRDS

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birds of prey only a narrow area near or at the nest is defended. English Sparrows are often semi-colonial and only defend the nest itself.

Non-breeding, feeding only is a type of territory that may be defended in winter only or it may be an area defended but not included in the breeding territory.

Winter territory is an area defended for feeding purposes during the non-breeding season. Mockingbird pairs break up after the nesting period and individuals of both sexes defend solitary territories through the winter. Females sing and fight only during the fall and winter when they are holding solitary territories. Males hold territories throughout the year, being solitary in the fall and winter.

Mr. William Rowan demonstrated "roosting territoriality" in London by shooting 40 individual Starlings from a long line of sleeping birds. The spaces which these 40 birds had occupied remained vacant for some considerable time. Another man placed a stuffed specimen of a Creeper (Certhia familiaris) in the roosting crevice used by a wild, living Creeper. When the owner of the crevice returned to its sleeping place it violently attacked the specimen.

These territorial classifications should not be interpreted as rigid categories. Some species have two or more types and others are intermediate. Some species of birds such as Cowbirds, Society Finches, and some species of Parakeets seem to lack territorial responses. Some species seem to be attached to a particular area but do not defend it. This seems often to be true in wintering birds.

Territorial behavior is not limited to birds. It has been demonstrated in fish, lizards, and mammals. It may occur in ants and crabs. Thus territorial behavior is known to occur widely among vertebrate animals. It is based upon a positive reaction to a particular place and a negative reaction to other individuals.

Territorial behavior serves as a device for regulating interference in the nesting cycle, to bring the sexes together; to assist in pair formation; to ensure an adequate supply of food during the breeding period ■

Watch for Part II in next issue of Watchbird.

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