It is apparent from much of what is heard at bird clubs and occasionally seen in print, that there is a genuine lack of appreciation for the complex environmental factors, that must exist concurrently, before a given species of birds will breed successfully. The bringing together of such requirements is not difficult, but demands patience, genuine interest, and a commitment to breed, rather than "collect".

Once importations of birds from other countries cease, as they ultimately will, the variety of species of birds available to the aviculturist will likely decline drastically. The first to disappear will be the "Softbills", which few are prepared to handle because of the time required. The Finches will disappear, which, though easy to maintain, are more delicate than Psittacines and Game Birds.

If American aviculturists wish to have the variety of birds found in European aviculture, they must take a more serious attitude and concentrate on establishing species in captivity. This series of articles will aim at furthering the establishment of Finches in captivity.

It should be pointed out that only a handful of Finches are really well established in U.S. aviarries. These include the Zebra, Shaftail, Lady Gould, Society, and to a lesser extent the Diamond Sparrow, Gold Breasted Waxbill, and perhaps the Cordon Bleu. I choose to define "well-established" as meaning the species is fairly prolific, and is being bred by a large number of people on a frequent basis. Although a far larger number of species are bred than those mentioned, the percentage is quite low, given the numbers kept by individual breeders.

Raising finches presents a challenge that is not easily met, as most finch fanciers well know. Nothing succeeds like success, and nothing turns breeders away from finches more than lack of success.

Before we can breed successfully, several criteria must be met. The following rules apply to all finches and form the basis of a sound husbandry program.

First, the birds selected as breeding stock must be healthy. They must be free from infectious diseases, including bacteria, viruses, and parasites (air sac mites, coccidiosis, trichomoniasis — a protozoan flagellate, gizzard worm, dispharanx worm, tape worm, etc). If a healthy flock is already established, new additions should be isolated at least thirty days, and the droppings examined for parasite eggs, if possible. A disease can easily decimate a flock and it is not worth running the risk, though most people seem to learn this rule the hard way.

Second, the birds must be fed a proper diet, which, at the minimum, should include a wide variety of seeds, greens, grit, cuttlebone, sterilized ground egg-
shell, mealworms or other insect supplement, fresh water daily, and a good multipurpose vitamin (Headstart Poultry is an excellent water soluble vitamin and very inexpensive).

Third, the aviary should be kept as clean as possible. Droppings should be removed periodically from the floor, the floor should be kept dry other than when plants are watered or it rains. Feeding should be constructed so that seed trays are off the ground and remains as free from droppings as possible (droppings spread bacteria and parasite eggs). Rodents should be eliminated as they urinate on the seed and often are responsible for E. coli bacterial infections (the effort to keep seed off the ground discourages them). Further, sow bugs, earwigs, and ants should be kept out of avairies as they are suspected of being intermediate hosts for gizzard dispharanx and tapeworm. Ants also can attack young nestlings and drive off parent birds. (A good insecticide is a 5% Malathion, 95% inert powder which is fast acting, yet harmless to birds. In fact, it is used in the treatment of air sac mite). 1

Fourth, the number of birds for a given size aviary should be limited. Overcrowding creates hassles over territories, which, in turn, inhibits breeding, and may even result in unnecessary injuries. My experience indicates that no more than six pair of finches, excluding Zebras, should be kept in an aviary, whose dimensions are 8' x 12'. (Height is not critical but should be sufficient to allow you to walk upright.) If backyard space limits the number of aviaries you can construct, then you will have to limit the number of birds you have. It is better to concentrate on a few species, with several pairs of each, than one pair of many. The latter is collecting, not breeding.

Fifth, only one pair of a given species should be housed in each flight. Experiments with this approach as opposed to colony breeding will demonstrate that more young per pair will be produced. This is born out by the experience of the most successful breeders. An added advantage to this system is the clear identification of families, thus enabling the breeder to avoid the unwanted crossing of closely related birds, and, interference is less likely to occur between intra-specific species.

If the above rules are observed, the finch breeder should have excellent results. There are some exceptions to rules four and five, specifically Zebras and Societies. However, the first three should be observed faithfully. Other modifications to rules four and five will be treated in subsequent articles dealing with the breeding of individual species.

In the next article, we will begin a discussion of the genus Poephila, i.e. Shaftail, Parson, and Masked Grassfinches. I will follow the taxonomic classification given by Immelmann (1966) 2 throughout this series.

2. Immelmann, Klaus, Australian Grassfinches