

## Transportation of Live Birds by Sea.

By W. H. THICK, OTTAWA.

*Continued.*

Peas, or pea-meal.—Perhaps the best method of using the above is in the form of German paste, viz.: fried with fat or oil, to which may be added sugar or treacle. In this way it may be kept a long time in tins or earthen jars. It can also be used in many other ways—for instance, mixed with moistened food, such as soaked bread, meat, fruit, potatoes or carrots. The peas can be soaked or boiled, and then ground and mixed with other food. In fact, peas ground afford a good and wholesome diet, and can be strongly recommended for all birds that will eat them; and as they can be prepared in several ways, they are almost indispensable.

Ground Barley, Oats, Wheat, and Indian Corn soaked or boiled (before grinding).—Any of these can be used, and, mixed with fruit or meal, &c., form a good and wholesome food. Care is necessary not to give too large a quantity of them, especially when ground into fine flour, as it is liable to get too cloggy. The introduction of bran, or better, pollard (fine bran), will prevent this; but always use meat, fat, or fruit when flour is used.

Rice is best used with pea-meal, or some other food. By no means attempt to use it alone. Boil it until soft, and then mix with meat, fruit, meal, &c., or it may be fried in fat or oil, after having been boiled to make it soft. Ground rice can be mixed after having been scalded; but it is better to boil it until it is well done.

Bread, Biscuits, &c.—In feeding with these, if the bread or biscuit be stale or hard and dry, scald or sock it in water until quite soft, then rub it up with pea or barley meal, &c., until the required condition is obtained; then add meat or fruit, &c., if thought desirable, according to the condition of the birds.

Hemp-seed.—For many birds this seed is invaluable. It must not, however, be used too freely; for its stimulating power is apt to produce disease. In order to regulate its use, it is well to bruise or grind it, and then mix it with scalded or soaked bread, or other soft food. The reason why this is recommended is, because some birds will not eat it whole, and, on the other hand, some birds will pick it out from the other food and eat nothing but this seed, and a fit of apoplexy generally follows. Still it is strongly recommended in moderate use, and a drooping bird will often be recovered by it. Care must be taken to see that the seed is good, which may always be ascertained by bruising it. When crushed it ought to be white inside and oily; if yellow or brown it is rank

and poisonous. Many birds are lost by using bad hemp-seed.

Bran and Pollard.—Experience shows that these may be used almost constantly. The birds are prevented from becoming too fat during their captivity by mixing bran or pollard with their food. These articles are especially good when mixed with meat, boiled rice, fruit, or fat.

Fruit (raw, cooked, or preserved).—Fruit of almost any kind appears to answer well, and, when prepared and mixed with one or more of the different ingredients mentioned in this paper, forms a food at once acceptable to these birds. Judging from their condition after some months' experience, there can be no doubt of the beneficial effects of the fruits I have employed, viz.: apples, pears, oranges, raisins, figs, currants, &c., The best manner of using them is mix them with meal, bran, or flour, and to pass them through a mincing machine. In this way they are chopped or ground fine enough to mix with the other food, the admixture of the meal preventing the loss of the juices of the fruits.

Potatoes and Carrots.—Potatoes require to be boiled or baked, and then ground or mixed with meat, fruit, meal, &c.

Carrots may be boiled and then mixed; or if first ground and put into a pan to stew or bake, then mix, they answer instead of fruit very well.

Meat.—Flesh of almost any kind, raw or cooked, will answer (always avoiding that that has been salted). A small quantity of fat is not objectionable. It must be well mixed with meal, as too much fat would be injurious.

Liver.—As fresh animal food is not always at hand, liver can be prepared in the following way. It is found to agree well with the birds, and can be kept any length of time:—Cut a bullock's liver into slices, boil it half an hour, then cut it up in a mincing machine. Place it in shallow dishes or tins, and put it into a slow oven until quite dry. In this state it may be kept well in tins, or still better in jars.

Eggs, boiled hard and chopped fine or ground are excellent for most birds, and can be mixed with almost any kind of food.

Insects.—These are eaten by most birds. A few are good for them, such as earth-worms, caterpillars, meal-worms, flies, maggots, grasshoppers, &c. Do not, however, adopt the too frequent use of living food, as birds are apt to crave after this kind of food and refuse to eat that prepared for them. Snails can be kept for a long time; and as they form a large portion of the food of Thrushus in a wild state, their use is recommended, as they can be chopped up and mixed with the other kinds of food.

Cheese can be occasionally given with the other