# CAGE-BIRD TRAFFIC OF THE UNITED STATES.

By Henry Oldys,
*Assistant, Biological Survey.*

## INTRODUCTION.

Three hundred thousand cage-birds, largely canaries, are annually imported into the United States. Some of these are destined for zoological parks and a few for private aviaries, but the great majority find their way into the hands of those who desire to have a cage-bird or two to brighten the home. This yearly influx of captive birds may seem large, considering the comparatively small number usually in evidence; but it must be remembered that they are scattered over an area of more than 3,000,000 square miles, and are distributed among a population of more than 80,000,000, which allows but 4 birds a year to every 1,000 persons, or about 400 birds to a city of the size of Columbus, Ohio.

The practice of keeping live birds in confinement is worldwide and extends so far back in history that the time of its origin is unknown. It exists among the natives of tropical as well as temperate countries, was found in vogue on the islands of the Pacific when they were first discovered, and was habitual with the Peruvians under the Incas and the Aztecs under Montezuma. Caged birds were popular in classic Greece and Rome. The Alexandrian parrakeet—a ring-necked parrakeet of India—which is much fancied at the present day, is said to have been first brought to Europe by one of the generals of Alexander the Great. Before this living birds had been kept by the nations of western Asia, and the voices of bulbuls and other attractive singers doubtless added to the charms of the hanging gardens of Babylon, while in China and Japan the art of domesticating wild birds has been practiced for many centuries.

It is not difficult to account for the motive that underlies this widespread habit. The same spirit that leads to the domestication of wild flowers for adornment of the home and the pleasure derived from their beauty or fragrance is responsible for the similar transplanting of wild birds from their natural homes to those of their captors, and the parallel extends to the subsequent production of new varieties.

As a people, Americans have less of this spirit than prevails elsewhere. Despite the multitudes of birds weekly entering the country—a single vessel will occasionally deliver ten or fifteen thousand—our

interest in avicultural pursuits is comparatively slight. In Europe aviaries are numerous and their owners maintain a common interest by means of avicultural organizations and periodicals. Bird shows are held annually or oftener in London, Berlin, and many other European cities. A friendly but keen rivalry prevails among the owners of aviaries as to which shall first succeed in breeding species that have not previously been bred in captivity or in producing new hybrids. The journals and magazines devoted to aviculture serve as a medium of exchange of methods and experiences and keep their readers in touch with each other. In Germany, particularly, the practice of keeping, rearing, and studying cage-birds is very common. In many a dwelling one room is set apart for birds, and these bird rooms are not confined to a particular class, but are found in the homes of people of every rank and condition. As long ago as 1880 some 200 societies of amateurs existed, and several weekly publications and magazines devoted to birds attested the general interest in avicultural pursuits.

The breeding of cage-birds for sale is a regular occupation in several parts of Europe. Germany produces hundreds of thousands of singing canaries in the Harz Mountains, those of St. Andreasburg being unrivaled songsters; in England, Scotland, and Belgium fancy varieties of canaries are regularly bred for the trade; and at the Royal Society's zoological gardens of Antwerp, Belgium, the breeding of many species of foreign cage-birds is systematically conducted.

The United States has few aviaries, and most of these are devoted to pheasants and other large birds. For a few years an avicultural periodical was published, but the support it received was apparently insufficient, and at present there seem to be no periodicals and very few associations strictly devoted to aviculture. Hence in this country there is not that community of interest and information that characterizes the avocation in Europe. America supports a few small shows, mainly exhibitions of canaries; and small exhibitions of cage birds, mostly canaries, are usually held as adjuncts to the annual poultry shows of New-York, Boston, Chicago, Toronto, and other cities. The breeding of canaries and cage-birds for the trade in any numbers is practically unknown on this side of the Atlantic.

### TRAFFIC IN DOMESTIC BIRDS.

The once extensive trade in native American birds has dwindled to the vanishing point. Formerly mockingbirds, bluebirds, cardinals, tanagers, indigo birds, and nonpareils were caught in large numbers and sold either here or abroad, and more or less trade in other species prevailed. Bluebirds, which are known as blue robins or blue nightingales in England and France, were imported into England some time before 1869, as in that year they were first bred in the London

Zoological Gardens. They are regarded with much favor by amateurs and have been repeatedly bred in private aviaries. Mockingbirds were bred in French aviaries before 1873. While intolerant of cage mates, they are much valued in Europe for their song, which, however, is there considered inferior to that of the nightingale—a judgment partly assisted, perhaps, by patriotic bias and association. Scarlet tanagers and cardinals are ranked very high in Europe, and frequently win prizes in bird shows. Evidence of the esteem as cage-birds in which the latter are held is shown by the fact that they are listed on the price list of a London bird dealer for September, 1906, at more than $5 apiece. Of interest in this connection is the statement of Gemelli Careri, quoted by Nuttall in his Manual of Ornithology published in 1832, that "the Spaniards of Havana in a time of public distress and scarcity bought so many of these birds [cardinals], with which a vessel was partly freighted from Florida, that the sum expended at $10 apiece amounted to no less than $18,000." Indigo birds and nonpareils are valued for their attractive plumage. Of the latter thousands were annually exported to Europe, where they sold for $1.50 to $2 apiece.

In consequence of the continual trapping to supply the increasing demand, several of these birds became rare in localities where once they had been common. Nearly every State had a law protecting nongame birds, but such laws were at that time imperfectly framed and ineffectively enforced. The usual exception authorizing the keeping of birds in cages as domestic pets was unaccompanied by any restriction on trade, which, in consequence, flourished. Imperfect as these laws were, they were rendered still less effective by the absence of public interest in their observance and adequate provision for their enforcement. Gradually, however, the influence of the bird-protective movement began to make itself felt and the laws were improved. One State after another adopted a model law framed by a committee of the American Ornithologists' Union, which instead of simply prohibiting the killing of a few birds specifically named, as had formerly been done, prohibited the killing, capture, or possession of all birds other than game birds and a few injurious species, and interdicted all trade in them. The interest in bird life awakened by the efforts of this organization and the various State Audubon societies caused these laws to be more or less vigorously enforced, and the trade in native birds declined proportionately. Supplies were still obtained, however, from States that had not adopted modern laws, and the export trade to Europe continued brisk. One by one these remaining strongholds were carried by the forces of bird protection until finally, in 1904, Louisiana, the only State left from which birds were procurable, adopted the model law, and now, beyond a few surreptitious and illegal shipments, the domestic and foreign trade in native

American birds has been entirely abolished. Occasionally a small consignment of mockingbirds or cardinals is smuggled to Hamburg or some other European port, but the life of the trade is gone.

### TRAFFIC IN FOREIGN BIRDS.

The importation of foreign cage-birds has grown to its present proportion, not only in this country, but in Europe as well, within the last fifty years. Up to the middle of the last century, apart from parrots and some other of the larger species, few birds were imported into Europe, and as late as 1860 only about 60 different kinds of foreign birds were brought in, and these in moderate numbers. But about this time a rapid increase began, and by 1880 the species imported approximated 700 and the individuals from 500,000 to 800,000. The Japanese robin, a favorite cage-bird of to-day, was first brought to the London Zoological Gardens in 1886, and the shell parrakeet of Australia, now one of the best known of exotic birds, and sold at wholesale in London for about $1.37 a pair, was first brought to England by Gould in 1840, and for the next ten years commanded $100 to $125 a pair.

In the United States the growth of importation has undergone a similar development, lagging, however, slightly behind the European growth. In both cases the sudden invasion of the markets by foreign birds was due to the advantages of quick transportation. When supplies from distant lands were brought by sailing vessels but few birds survived the long voyages. But the steamship afforded opportunity for conveying birds with speed and safety, and dealers were quick to avail themselves of the changed conditions. As long ago as 1865 there was a brisk American trade in foreign cage-birds of all kinds, and by 1880 this had so increased that a single dealer in New York City handled 70,000 canaries each season.

### NUMBER OF BIRDS IMPORTED.

The decline in the trade in domestic cage-birds has doubtless stimulated the trade in foreign cage-birds, which advanced from 235,433 imported under permit of the Department of Agriculture in the year ending June 30, 1902, to 322,297 in the year ending June 30, 1906, an increase of 37 per cent in four years. At the beginning of this period the model bird-protective law previously mentioned had been adopted by 16 States; at its close it was in force in 35.

Of the birds imported in the year ending June 30, 1906, 274,914 were canaries and 47,383 miscellaneous birds. The canaries were nearly all raised in Germany. Thirty-three per cent of the miscellaneous birds were from the Orient, 30 per cent from Europe, 22 per cent from Australia, 7 per cent from Cuba and Mexico, 6 per cent from

Africa, and 1 per cent from South America. The remaining 1 per cent were of unknown origin. In addition to these, 2,700 canaries, mostly from Germany, and about 6,000 parrots from various tropical countries came in without permit, no permit being issued for these birds when they are unaccompanied by others.

### HOW BIRDS ARE SECURED.

A peep behind the scenes is always interesting, and when we see diverse and remote regions of the world pouring their treasures of bird life into our country a desire is awakened to know by what means this is accomplished.

In some cases the method is as old as the history of maritime commerce. From the time when vessels began to make voyages to other countries sailors have brought back trophies of various sorts, including specimens of the fauna of distant lands. Some birds are still thus brought in and are bought by dealers in the various ports of entry.

This method, somewhat systematized, prevails at San Francisco, where the trade, temporarily suspended by the earthquake and fire, is now beginning to revive. Supplies are here obtained from the crews of steamers coming from China and Japan, who make a regular business of transporting cage-birds, usually under an arrangement with the steamship companies by which they are employed whereby freight is paid out of the proceeds of sales. The birds thus imported are considerable in number, but few in species, being mainly Java sparrows, diamond sparrows, Chinese mockingbirds, and other common kinds.

But most of the birds imported are secured by more highly organized methods. Several of the leading importers maintain forces of men to secure the desired birds either in their native haunts or in European ports to which they are brought by the agents of other importers.

Parrots are generally taken while still in the nest. During the nesting season the leading American houses send men to Cuba, Mexico, or South America to obtain stock. Headquarters are established by these agents at some point convenient to the parrot country and natives are employed to secure the young birds, which are forwarded to the United States in periodical shipments. Agents have sometimes been sent from this country to Africa to secure supplies of the favorite African gray parrot, but these are usually obtained in European ports from vessels arriving with supplies for the large European houses.

Small birds, other than canaries, are generally captured with nets. Expert netters continually visit remote regions in the interest of wholesale houses of Hamburg, London, Liverpool, and other large cities of Europe. Similar expeditions are dispatched from New York and Philadelphia to Cuba and Mexico and occasionally to more distant lands—even India; but the principal American houses maintain connections with establishments in Germany, through which their supplies of Old World and South American birds are more commonly procured.

Canaries are obtained by agents who visit breeders in the Harz Mountains, the Tyrol, and other parts of Europe. A few, however, are imported at San Francisco from breeders in China and Japan.

### HOW BIRDS ARE SHIPPED.

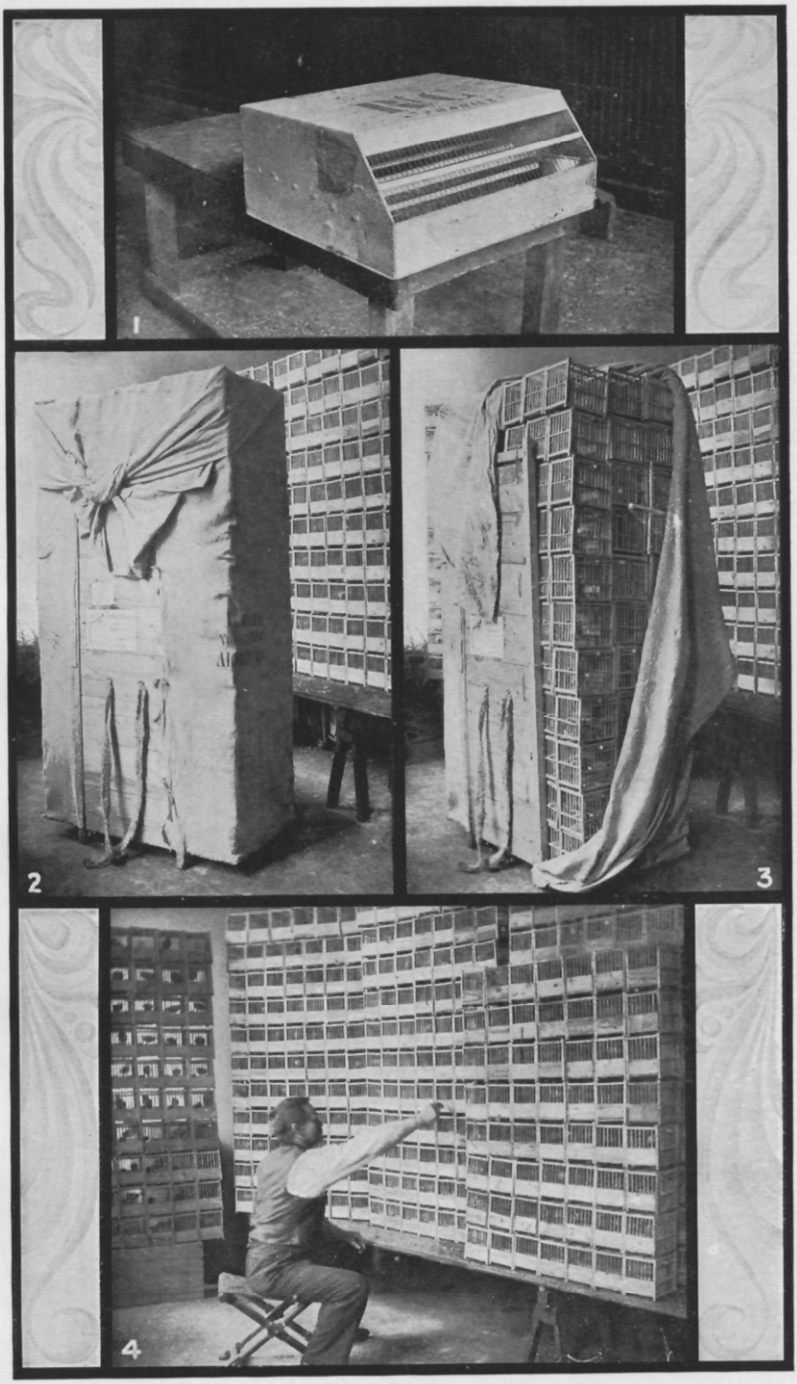
Most of the small birds received from Africa and Australia are shipped in large boxes especially prepared for the purpose (see Pl. VIII, fig. 1). These boxes are of different sizes and accommodate from 1 to 125 or 150 birds, according to size of box or of birds shipped. Shell parrakeets are sent from Australia in especially large boxes, sometimes as many as 500 making the journey in a single box. The birds so shipped are of a peaceable disposition and may be caged together without fear of their injuring one another; but some birds, such as bullfinches, goldfinches, and male canaries, are quarrelsome, and each bird has to be placed in a separate cage.

Canaries are confined in small wicker cages, seven of which are strung on a stick, constituting what is technically known as a row. When shipped across the ocean these rows are crated and a linen or burlap sack specially made for the purpose is placed about each crate (see Pl. VIII, figs. 2 and 3). A crate usually contains 33 rows. To paraphrase the old riddle—every sack has 33 rows, every row has 7 cages, every cage has 1 canary (or sometimes 2 if the occupants are the more peaceable females). Often more than two dozen crates are shipped in one consignment. Each of these must be opened every day of the voyage, every row removed, and food and water placed in the cages. In this daily re-crating the rows are rearranged so that the benefits of outside positions may be more evenly distributed among the birds.

On arrival in port consignments of birds (which pay no duty) are entered at the custom-house under permit from the Department of Agriculture, usually secured in advance by the importer. The larger shipments are generally examined by one of the special inspectors of the Department stationed at the principal ports of entry. Nearly all shipments subject to such inspection enter at New York and Philadelphia. After the inspector has examined a consignment to ascertain that it contains no objectionable species, and has noted, for subsequent report to the Department, the number and kinds of birds it comprises, the importer is free to dispose of it.

It is the aim of the importer to sell his stock as quickly as possible, to diminish his losses by death and so increase his profit. It is estimated that the mortality en route and in the store among some of the more delicate species of birds, such as African finches, may reach 14 per cent.

Zoological parks and aviaries are usually supplied direct by the importers, but the general public is reached by way of the retailer.



METHODS OF SHIPPING AND TESTING CAGE BIRDS.

[1.—Cage for shipping small birds (see p. 170). 2.—Crate of canaries ready for shipment (see p. 170). 3.—Crate of canaries partly open to show rows of cages (see p. 170). 4.—Testing singing of canaries (see p. 173).]

Many small bird stores are scattered over the country, and some of the large department stores have added birds to the great variety of merchandise they handle. Small consignments are shipped to retail dealers by express (at double rates). In the cages or boxes are placed water and food sufficient to last until arrival at destination. Sometimes, when the distances are unusually long, the express messengers supply fresh water and food en route, and large consignments are often accompanied by agents of the importers. Several of the principal importers have branch establishments at various points, such as New Orleans, Chicago, and San Francisco, which fill western orders.

### THE RETAIL TRADE IN BIRDS.

While retailers do more or less business during the entire year, three well-defined seasons are established. In February canaries begin to breed, and for the first two or three months of the year the trade in breeding canaries, especially females, is brisk. About the time it subsides the first shipments of young parrots arrive from Cuba and Mexico. These at once take the stage and hold it until the middle of August, when it is no longer possible to secure young birds. Interest then turns chiefly to singing canaries and the many other small cage-birds that are imported. The sale for these grows greater and greater and reaches its maximum by Christmastide, after which it abruptly declines. Many dealers probably make more sales in December than during all the rest of the year. In the Christmas season of 1905 one Philadelphia department store sold 4,000 canaries, besides other cage-birds.

From the character of the demand for cage-birds it is evident that the retail trade is, as a rule, not enough by itself to yield a profitable income. It is usually, therefore, combined with some trade of an allied nature. In retail bird stores one may usually find fowls of various kinds, pheasants, dogs, monkeys, squirrels, white mice, guinea-pigs, goldfish, and even lizards and snakes. The sale of food and cages also constitutes an item, and sometimes the proprietor acts as surgeon and physician to domestic pets.

### SPECIES IMPORTED.

During the year ending June 30, 1906, more than 200 species of cage-birds were imported into the United States. These comprised canaries, parrots (under which term we may include parrakeets, cockatoos, macaws, and lories), European birds, Oriental birds, African birds, Australian birds, and a few South American, Mexican, and Cuban birds. It is obviously impossible, in the space of the present article, to consider all these in detail; but a brief account of some of the most important will be of interest.

## CANARIES.

So widely known has the sweet-singing canary become that should an inhabitant of one of the civilized countries of the world visit the Canary Islands and hear the wild birds in their native home the strains would, in all probability, bring to the traveler memories of his own home. The clear and varied notes of this favorite singer are familiar to young and old, and many dwellings, from the great mansion to the obscure cottage, are alike brightened by their beauty. The position of the canary among cage-birds is unique—not only because of its widespread popularity, but also from the fact that centuries of domestication have rendered it peculiarly dependent on man. Its cage has become its natural home and to it liberty would probably mean death.

The bird is a native of the Canary Islands, the Azores, and Funchal (Madeira), and is said to have been brought from the Canaries to Spain and kept as a cage-bird by the Spanish nobility shortly before the time of the discovery of America. Other accounts make Italy the first country into which it was introduced and place the time early in the sixteenth century. It is sufficient for present purposes to note that it has been domesticated and prized as a cage-bird for the past four centuries. The wild bird is smaller than the bird now so familiar, and is also differently colored, having less bright yellow and considerable olive and brownish in its coloring. Nor does it sing as sweetly. Nevertheless, it is so attractive that soon after its introduction it became a general favorite, and was bred so assiduously that it is said that by the beginning of the eighteenth century 27 different varieties were produced. It is interesting to note that canaries are now exported from England to the Canary Islands.

The canary is a very good imitator. Mature birds have been known to reproduce very closely the songs of even such birds as chewinks, house wrens, and others, and the faculty has been utilized by breeders to determine to a certain extent the quality or character of the song of a young bird. In Germany young canaries have been associated with nightingales and in England with woodlarks to this end. But the method commonly employed at present is to place the young bird with a canary that possesses a superior song and is kept solely for training purposes. The fine singers used for this purpose are called "campaninis" and command high prices. Singers are measured by the richness and sweetness, not the strength, of their tones. Thus the voice of one of the choice St. Andreasburg "rollers" (which sell at wholesale for $24 to $36 a dozen, according to season, while ordinary canaries range from $15 to $21 a dozen) could easily be drowned by the singing of many an inferior canary. A single bird with a superior voice, especially a campanini, will sometimes command a price for which several dozen ordinary singers can be bought. Ordinary female birds,

on the other hand, which are purchased mainly for breeding purposes, may be had as low as $6 a dozen at wholesale.

As previously stated, singing canaries are bred in the Harz Mountains of Germany. Large numbers are raised by the cottagers of this region and are bought directly from them by buyers for the wholesale establishments of Germany and England and the German branches of American establishments. How much the industry means to the peasants near St. Andreasburg, the Brocken, and other localities in the Harz Mountains may be gathered from the fact that thirty years ago it was estimated that the trade amounted to $300,000 a year.

Some canaries sing much more freely than others, and immediately after the arrival of a consignment at the store of the importer the interesting process of testing the singing qualifications of the different individuals is begun. Cages are piled one deep in a tier containing 40 or 50 rows. In front of this large, somewhat semicircular pile, each cage containing a single occupant, sits the tester, watching and listening (see Pl. VIII, fig. 4). Many notes are to be heard, but it is difficult to determine from which of the many scores of throats they proceed. This is the duty assigned the tester, and when he is certain that any particular bird is singing, he places a chalk mark on the cage containing it. Marked cages are subsequently removed and their occupants are sold as guaranteed singers. Testing canaries is difficult and requires both patience and training, yet on a clear, sunny day, when the birds sing more freely and can be more clearly seen, an expert will sometimes mark 500 cages.

In the breeding of canaries song has not been the only desideratum, but has shared consideration with shape and color. The potency of artificial selection is as well shown in this pursuit as in the rearing of fancy pigeons, and some quite as distorted shapes are produced. Thus Belgium has succeeded in giving to the world a big canary with broad shoulders abnormally raised above the small head. And Scotland has produced a type—the Scotch fancy canary—that is bent like a bow, so that when the bird is at rest on a perch a line drawn from bill to tip of tail would pass well in front of the feet. Other abnormal products of breeders' ingenuity are the Yorkshire canary, very long and very slim, and the Lancashire or Manchester coppy, well proportioned, but a very giant among canaries.

Still other fancy varieties are the Norwich canary, at present a popular favorite, the London fancy canary, the border fancy canary, and the lizard canary, a dark bird with gold or silver spangles and yellow crown. All these are further subdivided by breeders and fanciers. Norwich canaries and Manchester coppies are frequently ornamented with crests. Endowing with a crest a bird that has none naturally is striking evidence of the possibilities of artificial selection.

The diversity is further augmented by color possibilities. All canaries are either "yellow" or "buff." These are technical terms, however, and are somewhat misleading. A yellow (or jonque) canary is one whose plumage is lustrous; a buff (or mealy) one is one whose plumage is dull and has a frosted appearance. Cinnamon canaries with pink eyes, and green and piebald canaries also, are bred, and a few decades ago it was discovered that by feeding young canaries freely on cayenne pepper the yellow could be deepened into a rich orange. The combinations offered by these different characteristics are very numerous, and when to them are added the results of hybridizing with other species—goldfinch, linnet, siskin, and others—as is done for the production of the much-prized "mules," unlimited possibilities seem to open out before the breeder. In breeding for shape and color, singing qualities are neglected, and canaries in which these are so highly developed often have little left of the sweet song that was the chief cause of their original domestication.

In view of the great number of varieties that have been produced and the differences in style and quality of song, and taking into consideration also the patience, care, and skill bestowed by breeders in producing and maintaining at an established standard the various results of their work, it is not surprising to find great differences in the prices of canaries. Ordinary male canaries may be bought for $1.50 to $2 apiece at retail, and from this the prices rise, through Norwich, Yorkshire, lizard, Manchester, and Belgian canaries in order, and reach in the last a wholesale rate of $30 to $50 a pair. Song production has not been led into bizarre channels, and that beauty of song is more highly estimated than odd shape is shown by the fact that one of the finest singers among the "rollers" may command as much as $150.

### PARROTS.

So far as known, the first introduction of parrots into Europe occurred in the fourth century B. C., when, it is related, one of the generals of Alexander's army, returning from India, brought with him specimens of the ring-necked parrakeet. These parrakeets, which were called "Alexandrian parrakeets," after the monarch in whose reign they were introduced, are still very popular with bird-fanciers, and are so common in India that sailors continually bring them to Europe and America. They are docile, and while slow in acquiring speech, finally make excellent talkers. Roman writers inform us that they were not eaten in India, but were held sacred because of their ability to reproduce human speech.

African parrots were brought to Rome in the time of Nero from beyond upper Egypt, where they had been discovered by explorers. They were highly prized, both as pets and as table delicacies, by the

Romans, who kept them in cages of tortoise-shell and ivory with silver wires, and often paid more for one than for a slave.

The earliest knowledge we have of the keeping of West African parrots as pets in Europe dates back to 1455, when Senegal parrots were first introduced. American parrots owe their introduction into the Old World to Columbus, who carried a few back with him on his return from his first voyage to America. They were among the objects of interest when he made his formal entry into Seville on March 31, 1493. Five years later the Portuguese circumnavigated the Cape of Good Hope, subjugated a part of India, and reintroduced the Indian parrots into Europe.

The most popular parrots are the little green Australian parrakeets, variously known as shell or grass parrakeets, budgerigars, or love birds. These birds, familiar on the city streets in the capacity of fortune-tellers and performers of tricks, are retailed in this country at $4 or $5 a pair. They are among the easiest of all foreign birds to breed and are raised in large numbers in Europe, from which source come many of the birds brought to the United States. In the year ending June 30, 1906, we imported 5,387 to supply the demand, including a few of a yellow variety produced by the breeders of Belgium and France. Shell parrakeets are easily transported from Australia, owing to their ability to exist for long periods without water, and have frequently been carried to Europe in sailing vessels, making a three or four months' voyage, without being supplied with water.

Cuban parrots have recently risen in favor and several thousand were needed to meet the year's demand. These medium-sized green, red, and blue birds with whitish crowns make fairly good talkers, and sell at wholesale for $24 to $27 a dozen.

Amazons from Mexico and Central and South America, which average $6 apiece at wholesale, are favorites among the larger parrots. They are known as blue-fronted, red-fronted, yellow heads, double-yellow heads, etc., according to the markings of the head. The blue-fronted amazons seem to be preferred in Europe; but the double-yellow heads make the best talkers, and when well trained command prices ranging as high as several hundred dollars apiece.

The African gray parrots are probably unrivaled in ability to reproduce human speech, and have been popular pets in Europe since the Middle Ages. Unfortunately they do not stand transfer very well and the great majority of the few imported die soon after arrival.

The larger parrots have not yet learned to talk when they arrive, and, as a rule, are disposed of at once to retailers. By these they are often taught by means of specially constructed graphophones, which automatically repeat, for hours at a time, selected words, phrases, or songs.

Parrots often attain great age—gray parrots have been known to live ninety years. They display affection and intelligence, and make very interesting, albeit somewhat noisy pets. They should be allowed frequent liberty from the cage for exercise, where it is feasible; and they are much pleased and benefited by simple toys with which to relieve the tedium of confinement—an empty spool, a piece of tape fastened to the wire of the cage, or some similar object.

Macaws, large birds with glaring reds, blues, yellows, and greens in their coloration and with voices to match, are secured in tropical America; a few lories are brought from the Pacific regions; and many cockatoos from Australia and neighboring islands. Of the last the rose cockatoo from the Moluccas seems to be preferred. Nearly 300 were imported during the year. Both macaws and cockatoos are difficult to handle. Their powerful beaks are weapons not to be despised, and are used so freely that specially strong cages and perches are needed to withstand their destructive attacks. Macaws were greatly prized as pets by the Peruvians before the Spanish conquest.

The little yellow-crested cockateels from Australia seem to win less favor here than in England, where they are fairly common in aviaries, while but 30 or 40 seem to be enough to supply our annual needs. They retail here at $8 apiece and in England at about $2.50 a pair, a difference in price that may partly account for the difference in favor.

### EUROPEAN BIRDS.

The European birds ordinarily imported are sold at wholesale for $9 a dozen, with two exceptions—siskins, plain-colored birds, which are usually secured for crossing with canaries and which bring only $6 a dozen, and trained or "piping" bullfinches, which command $15 each. The handsome goldfinches are easily first in popular estimation, as is shown by the fact that 5,000 are annually brought in. Of bullfinches, 1,500, mostly untrained, entered during the year. More than a thousand each of siskins and linnets are imported each year and several hundred skylarks and chaffinches. Song thrushes, blackbirds, and black-caps show some degree of popularity; and so doubtless would the robin redbreast—the true robin of our nursery tales and jingles—were it easier to keep alive in confinement. Nearly a hundred nightingales are annually brought across the ocean, but very few ever again utter the song that has become so famous. Their silence is a mute but eloquent protest against their captivity, and serves to remind us that in caging a bird we do not necessarily cage its song.

### ORIENTAL BIRDS.

The Orient furnishes several of the most popular cage birds—Java sparrows, of which we imported 6,285 in the year ending June 30, 1906;

Japanese robins, of which 4,539 were brought in; Japanese nuns of various kinds, which aggregated 1,780; and strawberry finches, of which 1,280 were needed to supply the demand.

Java sparrows, also known as paddy or rice birds because of their destructive work in rice fields, are hardy and breed freely in captivity. Their general color is a soft bluish gray, set off by the red bill and conspicuous white marking about the face. A white variety has been produced in the Orient. These retail for $3.50 each, while the grays bring only $1.50 apiece. Pure whites are not very common—in most white birds more or less of the blue-gray appears. Java sparrows were among the earliest foreign birds imported both in Europe and the United States, and those procured for the trade are, like canaries, chiefly cage-bred birds. The Japanese now breed these birds in large numbers. In order to increase production they raise the young by hand, feeding them with a sort of spoon cut from a thin bamboo splint. The old birds, thus relieved of the care of their young, are free to breed again at once.

Japanese robins, usually called Pekin nightingales by English aviculturists (who know our cardinals as Virginia nightingales), were imported to the number of 4,539. They are peculiarly colored—dark and greenish with distinctive yellow and orange on breast, bill, and wings. They are easy to keep, possess a sweet and musical song, and have a song period of ten months, which contrasts favorably with those of most cage-birds, the nightingale, for example, which, when it sings at all, is in song for only two months. They are native in China, Japan, and India, and were first brought to England about 1866 and to the United States ten or fifteen years later. They retail at $4 each.

Nuns are small birds of different species, such as the black-headed, white-headed, and tricolored nuns, the spicebird or chestnut finch, and others. Most of them have more or less dark brown in the coloring. A pure white variety and a buff and white variety of one species—the Japanese nun, also known as bengalee or mannikin—bear testimony to the assiduity of Japanese breeders.

An attractive singer that seems to be growing in popularity is the shama thrush from India. Its song suggests by turns those of catbird, bobolink, and brown thrasher, but contains some clear mellow tones not in the repertoire of those singers.

A few bulbuls are brought from India, mainly red-vented bulbuls, but including other kinds. These do not include, however, the famous bulbul of Persia, the oriental counterpart of the European nightingale, and they add comparatively little to the total number of songsters imported.

The hill minas of India, like parrots, can be taught to talk, but very few are imported. These retail at $17 apiece.

### AFRICAN BIRDS.

Most of the cage-birds from Africa, which are brought to London, Liverpool, Marseille, Bordeaux, and other European ports in immense numbers, are secured for beauty of plumage, not song. The African weavers, 994 of which were imported during the year, in addition to attractive coloring offer an interesting exhibition of their skill in the art that has given them their name. At nesting time, if furnished with worsted or other suitable material, they will weave this in and out of the wires of their cages, making neat and compact examples of their handiwork. Bishops and Madagascar weavers are brilliant red and black in coloring, cut-throats have a band of red across the throat, from which is derived the name, and whidah birds (incorrectly called "widow" birds) have extremely long tails. The group furnishes an instance in which one family contains both bishops and cut-throats. A Napoleon also figures among its members, and all are frequently associated with Japanese nuns and Brazilian cardinals.

Waxbills numbered 555 in the year's importations. These include the dainty little cordon bleu, or crimson-eared waxbill, various species of silverbills, and several other kinds. The violet-eared waxbill, a bird of radiant, prismatic beauty, is brought to England, but has apparently not yet come to the United States. The tiny zebra finches, easy to keep and breeding readily in captivity, are favorites with the bird-keeping public, 591 coming in during the year. African siskins are also somewhat popular, and a small but increasing number of edelsingers, or African gray singers, one of the few African species that have a pleasing song, are imported annually.

African birds generally bring $1.50 a pair at wholesale. Most of them have light, unmusical, but not disagreeable, notes, and being bright and active, give life to room or aviary where they are confined. While the breeding time of most of them is during our winter (the seasons being reversed south of the equator), many of the little immigrants adapt themselves readily to the changed conditions and breed in the summer of the North Temperate Zone.

### AUSTRALIAN BIRDS.

Ordinary Australian birds also sell for $1.50 a pair wholesale. Of these, apart from shell parrakeets, diamond sparrows are imported in the largest numbers, the year's supply being 332.

Australia is notable, however, for its charming Lady Gould finches, which, perhaps, reach the highest point of beauty and elegance attained by any of the smaller cage-birds of the world (see Pl. IX). Few are sold in this country, possibly because of their high price—$9 to $10 a pair at wholesale—and because they are difficult to keep (an English fancier says of them that they suffer all the ills that beset other cage-birds and several special ones of their own). They are highly prized

A. HUMM & CO. BALTIMORE.

LADY GOULD FINCH.

in England, where they have been bred a number of times. The main reason for their unusual mortality seems to be improper treatment. Because they come from the warm climate of Australia, they are usually kept where they have plenty of sunlight. As a matter of fact, however, as recently pointed out by a writer in "Bird Notes," they inhabit dense scrub, and in their natural habitat avoid the direct rays of the sun. To place them in a small cage in the sunlight is a very effective method of destroying them. Lady Gould finches are attractive in their ways as well as in appearance. They tame readily, are not pugnacious with cage mates, and exhibit many individualities of disposition. They have a very interesting little dance that sometimes forms a part of their courtship.[a]

### BIRDS FROM SOUTH AMERICA, MEXICO, AND CUBA.

Omitting parrots, gray cardinals are the principal cage-birds imported from South America. In England these vie in favor with our own cardinal, from which they differ in being gray in color, with no red excepting about the head. During the last fiscal year we imported 455, which were retailed at $3.50 each. A number of different species of small birds are annually brought from Mexico and Cuba, but none in important numbers except tomeguinos, known also as grassquits or melodious Cuban finches and olive Cuban finches, according to species. These sell for $1.50 a pair wholesale, and 665 entered during the year.

### BIRDS BRED IN CAPTIVITY.

In Europe, as has been stated, great interest is manifested in breeding cage-birds. This interest attaches to the propagation, not only of rare birds, but of many species that are commonly found in aviaries. There is a great difference in the ease with which birds may be bred in captivity. Some, such as shell parrakeets, zebra finches, Java sparrows, strawberry finches, and our own bluebirds and indigo birds, breed readily and their young can be raised without much difficulty. But some of the parrots and small cage-birds refuse to mate, others will not sit on their eggs, and others yet neglect their young. To breed such species requires much patience and ingenuity, and success is valued accordingly. In the United States, where bird-fanciers are few and lack association, there is not the same general interest in the breeding of captive birds. Few Oriental birds other than Java sparrows and but few of the small cage-birds from Africa and Australia have been successfully bred in the United States. Among the more important birds that have been reared in this country are the canary, shell parrakeet, black-crested mina, all-green parrakeet, gray parrakeet, cockateel, graceful ground-dove, barred-shoulder dove, zebra finch, white

[a] See a detailed account of this dance by Captain Perreau in "Bird Notes" for November, 1905, Vol. IV, No. 8, p. 203.

Java sparrow, gray Java sparrow, cut-throat finch, and saffron finch. Some hybrids have been produced by breeding canaries with goldfinches, linnets, and other birds, thus securing well-known and greatly valued mules.

### OPPORTUNITY FOR AMERICAN ENTERPRISE.

The large and rapidly growing demand for canaries and other cage-birds that has sprung up in the United States and that is now satisfied by importations from abroad suggests the possibility of establishing the industry of raising birds for market on this side of the Atlantic. It is more than likely that interest in the keeping of cage-birds will continue to spread, and that its growth will result in the development of societies, periodicals, annual shows, and other features that mark its advance in Europe. Breeding canaries for market brings, as has been shown, several hundred thousand dollars annually to the peasants of the Harz Mountains of Germany; canaries of fancy shapes that command high prices are regularly bred in England, Scotland, Belgium, and other countries; and it is important to note that in nearly every instance the pursuit is carried on as an adjunct to some other occupation. There is no reason why the American market should not be supplied by American breeders. The need already exists; imported birds are not so well adapted to our climate as those raised here, and home production would obviate the large losses incident to the ocean voyage.

Many difficulties must be met. Captive birds are subject to numerous diseases and, under the most favorable circumstances, require careful treatment. Attention to diet is important, particularly in the case of soft-billed birds, whose food is chiefly insects. Questions of suitable temperature for aviaries, of securing sufficient open-air exercise without undue exposure, of preventing destruction of birds or their eggs by cage-mates, of inducing birds to breed, and many other problems constantly tax the patience and skill of the aviculturist; and owing to climatic differences between Europe and America many of these questions would doubtless have to be settled anew.

But American ingenuity and energy should be able to meet and overcome all obstacles and establish the business on a paying basis. Due weight should be given the fact that the experiment requires little capital. It can easily be started at small expense and extended only as the profits justify extension. The field is a promising one. The success attending cage-bird breeding in Europe, the great demand for birds as pets in this country revealed by our large importations, the superior value of those bred in America, and the facility with which the business can be established and maintained offer strong inducements to American enterprise.