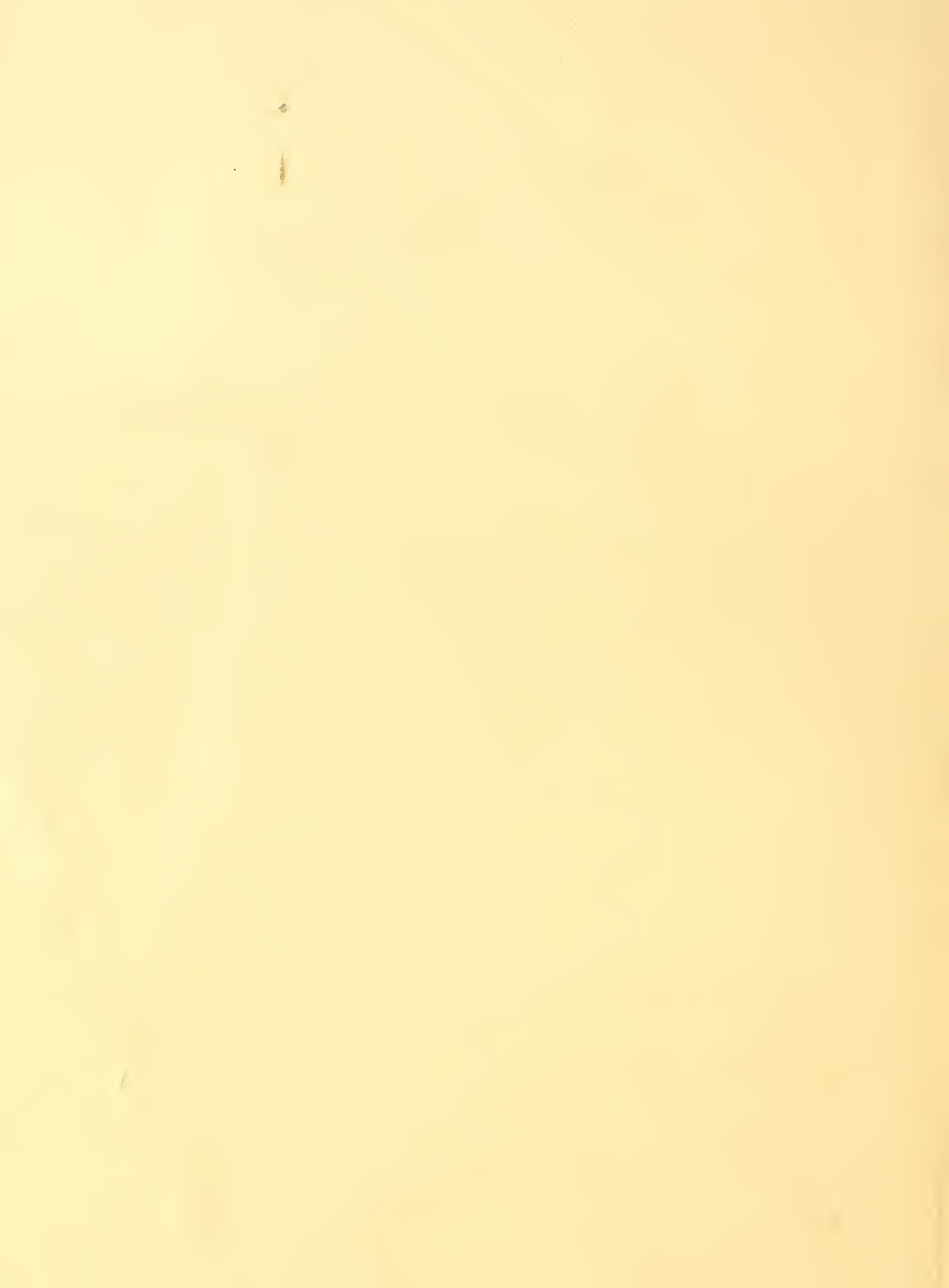


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THE JAVA SPARROW 1/

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The Java sparrow (Padda oryzivora) belongs to the family of weaver birds (Ploceidae) and when wild is not unlike the most familiar representative of this family, the introduced English or house sparrow (Passer domesticus), in size and bearing, in its tendency to gather in flocks when not breeding, and in its destructiveness to grain crops. It has earned the names paddy bird and padda because of its abundance during the growing season in the rice paddies of the Orient.

Common and Scientific Names

English: Blue Java, blue Java sparrow, brown Java sparrow, gray (grey) Java sparrow, Java, Java grosbeak, Java rice bird, Java sparrow, padda, paddy bird, red-eyed bunting, rice bird, white Java, white Java sparrow.

French: Calfat, galfat, oiseau de riz.

German: Reisfink, Reiskernbeisser, Reis-vogel.

Scientific: Padda oryzivora. Other genera to which this species has been referred are Amadina, Loxia, Munia, Oryzivora, and Oryzornis.

1/ Correspondents are invited to send supplementary data regarding this species to the Fish and Wildlife Service, United States Department of the Interior, Washington, D. C.

Distribution

This species still abounds on the island of Java despite persistent trapping for use as food and for export as pets. Wild Javas were early found well acclimatized on Bali and Sumatra before the first lists of birds native to the islands were published.

A favorite cage bird in the East Indies, China, and Japan for more than 400 years, the Java sparrow is a hardy species and breeds readily in captivity. It is to be expected, therefore, that individuals would escape and establish colonies near some of the famous seaports on the ancient trade routes between the Orient, India, and Africa as well as in the vicinity of bird-raising and bird-distributing centers. This explains its widespread but irregular distribution.

Java sparrows may now be found in the wild state in Australia, the Philippines, Borneo, Bali, Java, Sumatra, and the nearby islands; the Federated Malay States, Thailand (Siam), French Indo-China, southern China, and Japan; several coastal areas in India and Africa; and in the islands of Ceylon, Reunion, Madagascar, Zanzibar, and St. Helena.

Description

With its heavy body and short tail, the latter forming less than 2 inches of its over-all length of 5 to 5-1/2 inches, the Java sparrow presents a top-heavy, clumsy appearance. Though it prefers to spend much of its time on the ground in low grass and stubble, it can fly well and swiftly. The exceptionally thick beak is bright rose-red in color and is margined and tipped with pearly white. Because of the red-brown color of the iris the Java sparrow has been called the red-eyed bunting. The naked skin surrounding the eye is of a brilliant flesh color in contrast to the less vivid pink of legs and feet. A thin line of black feathers borders the merged white patches on the face, the check, and the ear coverts connecting the black throat and cap and emphasizing the startled, doll-like aspect of the face. The back, breast, and wings are lavender gray to slate in color, the belly and flanks have a vinaceous tone, the primaries, upper rump, and tail feathers are black, and the feathers of the thighs and under rump are nearly white. Although the terms "gray Java" and "gray Java sparrow" are commonly used for either wild-caught or cage-bred birds of the above description, the name "blue Java sparrow" has also been applied to them. In this leaflet the last-mentioned term is used for the pied white form.

Young birds, often erroneously thought to be females, vary in color from dirty buff to fuscous brown; the cheek patches and ear coverts are buffy, the bill is blackish, the iris is brown, and the legs and feet are pale, flesh brown. The bill, iris, legs, and feet attain the brilliant coloring typical of the adult from 4 to 6 weeks after the young leave the nest. The white cheek patches and ear coverts are acquired during the second molt.

Sexual Differences

The male and female may be distinguished by careful observation, though their plumage is identical. The female is usually smaller and slighter in build, and tends to have a narrower skull and a more tapering beak. According to some observers the feathers of the back and belly are of a lighter color in the female. During the breeding season the display antics of the male clearly indicate its sex.

Color Forms

Through careful and prolonged selection, the Chinese, and later, the Japanese, succeeded in producing a white form that breeds very readily in captivity. This white Java or white Java sparrow is neither an albino nor a mutant. Since it does not breed true, every brood must be carefully inspected shortly after hatching and all imperfectly white birds culled out, as there is no market for them. These pied birds, known as blue Javas and blue Java sparrows may show but one or two dark feathers, a grayish wash over the shoulders, or irregular patches of slaty gray. They tend to have lighter colored plumage after the first molt.

Another variation from the typical plumage pattern of the wild or gray Java sparrow sometimes occurs among caged individuals. These have black instead of white cheek patches and ear coverts and may have a black patch on the belly. There is a general darkening of the entire plumage, and the vinaceous color of the underparts is often lacking. These black-cheeked birds, considered to be males by some authors, have never been reported in the wild. They are of particular interest, since their color is not due to an excess of black pigmentation throughout, nor to melansitic spotting, but rather to a phenotypic aberration, which occurs independently of sex, age, and season. It seems to be due to some uncontrolled factor, possibly food or heat, to which the bird is subjected during the molting period. In black-headed individuals the cheek patches may be white during the first molt, and black again at the next succeeding molt, showing varying degrees of black and white coloring during the molt.

Brown Java Sparrow

The literature of aviculture contains vague references to the brown Java, brown Java sparrow, brown paddas, and brown rice bird. All these names properly refer to a closely related but very rare bird (Padda fuscata), native to the islands of Timor and Samau. In this slightly smaller species brownish black, chocolate brown, and white replace the metallic black, lavender to slate gray, and vinaceous coloring that characterizes the gray Java. The bill, the naked skin surrounding the eye, and the legs and feet are leaden to pale flesh brown in color, and the iris is dark brown. The birds thrive under the treatment accorded the gray Java, but very few brown Javas have ever been collected and it is doubtful whether as many as two dozen have been kept in captivity in Europe and America.

Hybrids

As noted in the preceding paragraph, and also (p. 7) under Importations and Regulations, there is some doubt about the identity of the brown Java sparrow. Certain of the early authors were undoubtedly referring to immature gray Javas but others seem to have been describing a hybrid produced by crossing the Java sparrow with the Bengalese. The latter is a domestic variety developed by the Japanese probably through selection or hybridization of sharp-tailed and striated finches (Uroloncha acuticauda and U. striata). Because of doubt as to its origin the name Munia domestica has been suggested for the Bengalese. Three well-developed color forms--chestnut and white, fawn and white, and pure white--are known, and at least two successful crosses have been made between female gray Java sparrows and male chestnut and white Bengalese.

Crosses can be most easily made with the following if the white Java is used:

- Cutthroat finch (Amadina fasciata)--male or female.
- Silverbill (Aidemosyne cantans?)--male or female.
- Nutmeg finch (Munia punctulata)--male.
- Red-headed finch (Amadina erythrocephala)--male.

Qualities as a Cage Bird

So far as is known the Java sparrow was first kept in Europe as a cage bird 200 years ago. Though it has run the gamut from the status of a much-prized and well-nigh priceless species to that of one of the lowest-priced of foreign birds, it still has an assured place because of its trim appearance and the ease with which it may be kept in good health. It is more desirable as a cage bird than as an aviary species because of its tendency to bully and persecute smaller birds. This propensity is manifested even among the progeny of a single pair, the young from earlier broods nipping the legs of those more recently fledged.

Because they can be taught to perform simple tricks, as playing dead, standing on their heads, and selecting fortune-telling cards for soothsayers, these birds make good pets. They have a monotonous, two-toned call note and a song having a thin, bell-like quality. The song of the captive-bred white form is often more pleasing than that of the wild, or gray, Java sparrow.

The white birds are more docile than are either wild-caught or captive-bred gray Javas; consequently, they breed more freely as aviary birds. As there is more demand for them, it is much more profitable to raise the white Javas in captivity and to rely on importation for a supply of gray ones.

The average duration of life in captivity is 6 to 7 years, but there are records of individual birds that have lived 12, 13, and 16 years.

General Management

Java sparrows are hardy, thriving equally well in the narrow confines of a cage or in a spacious aviary, indoors or out, and require but a minimum of care. Cages, food and water dishes, and perches used for canaries are satisfactory for their maintenance. The birds will keep their plumage in excellent condition if they are supplied with an abundance of coarse sand or fine gravel and some other mineral source, as lime or cuttlebone, and if they are given water for bathing every other day.

Though ideally suited for a small aviary, Java sparrows should not be placed with smaller birds unless there is sufficient shrubbery in which the latter may take refuge. Though Javas, particularly the white form, are generally peaceable, they occasionally run amuck bullying their associates and are capable of inflicting serious wounds or of breaking fragile legs by nips with their exceptionally strong beaks.

Feeding

In the wild state rice forms the staple diet of these omnivorous birds from March to November, supplemented by other cultivated-grass and weed seeds, wild fruits, insects and their larvae and pupae, and other soft-bodied animal forms, as sowbugs and spiders.

Javas have been maintained in captivity for long periods on a diet consisting solely of canary seed, Japanese millet seed, or unhusked rice, but it is better to use equal parts of these three seeds and to furnish seed sprays or green seeds of perennial rye grass, millet, bristle grass, shepherds-purse, and other grass or weed seeds in season. Because Java sparrows are not particularly fond of green food to find an acceptable one it may be necessary to try several different kinds, as finely chopped lettuce, cress, or grass, or grated raw carrot. Any of the following mixtures should be satisfactory as a year-round staple diet if supplemented by a small quantity of greens:

1. Equal parts of canary seed, white millet seed, and hulled oats.
2. Three parts each of canary seed and millet seed, one part each of unhulled oats, rape seed, and sunflower seed.
3. Six parts each of Japanese or barnyard millet and of proso or broomcorn millet, one part each of rape seed and crushed hemp seed.
4. Equal parts of unhusked (unpolished or brown) rice and millet seed.

Breeding pairs should be supplied with richer and softer food to insure that most of the young produced will grow to healthy maturity. This nestling food should be provided in addition to the staple seed mixture and green food. The soft foods, which usually contain a high

percentage of protein and are more subject to spoiling, must be prepared daily if refrigeration is not available. To avert diarrhea waste or unused foods should be removed from the cage before they sour. Any of the following soft-food mixtures should be satisfactory:

1. Cover 2-days' ration of millet seed with the yolk of a raw egg. This should not be used until the seed has soaked up the egg yolk.
2. Equal parts of crushed millet seed; dried, waste, fresh-water fish; and green food, chopped together. Prior to feeding add sufficient water to form a stiff paste. This mixture is much used in Japan in the commercial hand-feeding of white Javas.
3. Yolk of an egg, which has been boiled for twenty minutes, mixed with one-half cup of boiled white potato.
4. Mix the yolk of a hard-boiled egg with an equal bulk of dried "ant eggs," and a teaspoonful of dry white bread crumbs. Prior to feeding add enough scalded milk to form a crumbly mass.
5. Scald two parts of millet seed with a vegetable soup stock, strain, and mix with one part of egg food prior to feeding.
6. A good egg food may be prepared by boiling an egg for 30 minutes; forcing the shell, white, and yolk through a coarse strainer; and adding an equal bulk of dry white bread, unsalted soda crackers, or arrowroot biscuit crumbs.

Breeding

In captivity the gray Java sparrow is an unreliable breeder and, therefore, commercially unprofitable. The introduction of a strain of white Javas, and the selection, as they appear, of typical gray birds for breeders will produce an easily bred gray strain. The white form reproduces freely in captivity.

In Japan the propagation of the white birds is highly standardized and commercialized. The mated birds are kept in small cages arranged in tiers, the successive clutches of eggs being removed as soon as hatched, to enable the parents to produce, lay, and hatch more eggs. The young birds are hand-fed with a bamboo spatula, on the tip of which is placed a paste consisting of chopped millet, fish, and greens.

Wild Javas build their globular, frowzy nests of fine grass, straw, string, and paper, and line them with feathers from their bodies. Caged individuals construct similar nests in wooden cigar boxes, gourds, coco-

nut husks, or nest boxes of the kind usually provided for parrakeets and small parrots. Plenty of dried grass, straw, or other similar fibrous material and small, or downy feathers should be supplied to breeding birds.

In the wild state, mating and egg laying are more or less continuous except during the molting period. In captivity, in temperate climates, individuals may be deterred from breeding by cold weather, but to prevent loss of young or to inhibit egg laying it is well to separate the sexes, eliminate rich foods from the diet, and remove nesting materials during the winter season. Approximately 1 month after the young leave the nest the female again may commence to lay. Females 8 months old have laid fertile eggs, but young Javas should not be bred until they are at least 1 year old. Birds 2 years old and more will produce sturdier young. Though it is common practice to permit an adult pair to raise three broods yearly, they will produce larger and healthier young if allowed but two broods.

Nests of wild Java sparrows have been found that contained as many as seven or eight eggs, and there are records of captive birds that have laid six and seven fertile eggs, but clutches of four or five are average for domesticated pairs. Incubating and brooding birds should be interfered with as little as possible, to avert desertions.

The oval white eggs require 13 to 15 days for incubation, counting from the date of deposition of the last egg of the clutch. The helpless nestlings are fed in the nest by the parents for approximately 4 weeks, leaving the nest when fledged. They are able to feed themselves and to eat the staple seed mixture when they leave the nest, but soft food should be available to them for at least a month longer.

Importations and Regulations

In 1900 the Bureau of Biological Survey was charged with supervision of the issuance of permits to import cage birds as well as other foreign species. From then through the first half of 1939 a total of 182,977 Java sparrows were imported into the United States, principally through the ports of New York and San Francisco. Of the birds imported, 84 percent were gray and 16 percent white. There were 14 other individuals that may have been either the brown Java sparrow or a hybrid between the Java sparrow and the Bengalese.

In recent years importations have noticeably decreased, the number of Java sparrows imported in the last 10 years being slightly less than one-fourteenth of the total imported in the entire 40 years. The largest annual importation (11,419) was in 1907, and the smallest (140 birds) in 1934.

TABLE 1.--Principal commercial sources of gray and white Java sparrows

Countries	Gray	White	Both
	Percent	Percent	Percent
Europe, principally Germany and England.....	67	24	61
Japan and China.....	19	73	27
Philippine Islands.....	10	1	8
Federated Malay States, Sumatra, Batavia, Java, Cuba, Mexico, and South America....	4	2	4

Individuals, dealers, or importers who wish to obtain Java sparrows from foreign countries must obtain a special importation permit from the Secretary of the Interior, Washington, D. C. These permits are granted with the understanding that the birds are not to be liberated under any circumstances. Requests for the issuance of a special importation permit should contain the following information:

1. Number of birds to be imported.
2. Name and address of consignee.
3. Name of the port of entry, i.e., name of city, town, or port so designated where birds will be entered.
4. Approximate date of importation.
5. Country of origin, i.e., name of the country from which the birds are being shipped.
6. Destination in the United States.

The duty imposed on each wild bird having a value of \$5 or less is 50 cents, while that on birds valued at more than \$5 is 20 percent ad valorem. This tax is paid by the importer or his agent at the time the birds are passed through the customhouse at the port of entry.