

What activities may be conducted?

Most activities otherwise prohibited by the Endangered Species Act may be conducted PROVIDED that the purpose of the activity is to enhance the propagation or survival of the affected species. These activities include take, import or export, delivery, receipt, carriage, transportation, or shipment in interstate or foreign commerce in the course of a commercial activity, or sale or offer for sale in interstate or foreign commerce.

What are the limitations under the captive-bred wildlife regulations?

Activities which involve interstate or foreign commerce in the course of a commercial activity with non-living wildlife parts and products are not allowed. Generally, authorized activities may only be conducted with other persons who are registered with the U.S. Fish and Wildlife Service. Any registered person seeking to export or conduct foreign commerce in captive-bred endangered or threatened wildlife which will not remain under his care must first obtain the approval of the Director. Imports and exports may only be made through designated ports unless an Exception to Designated Port permit is obtained. No "first-time" imports are allowed under this registration. The only animals which may be imported are those which have been previously exported from the United States and which have been uniquely identified to a U.S. Fish and Wildlife Service employee at a designated port prior to export. Any requirements of other laws must also be met. Depending on the species, these might include import and export documents under the Convention on International Trade in Endangered Species of Wild Fauna and Flora, import/export or possession permits under the Migratory Bird Treaty Act, permits under the Marine Mammal Protection Act and requirements under the Lacey Act including marking of containers, filing a Declaration of Importation or Exportation of Fish or Wildlife (Form 3-177), and obtaining foreign documents when necessary. Registrants must also comply with any applicable state laws.

How does one register?

Application for registration must be submitted on an official application Form 3-200 to the Federal Wildlife Permit Office, U.S. Fish and Wildlife Service, Washington, D.C. 20240. The application must include the following information:

1. The types of wildlife sought to be covered by the registration, identified by common and scientific name to the taxonomic level of family, genus, or species;
2. A description of the applicant's experience in maintaining and propagating the types of wildlife sought to be covered by the registration, or in conducting research directly related to maintaining and propagating such wildlife;
3. A description, if appropriate, of the means by which the applicant intends to educate the public about the ecological role and conservation needs of the affected species;
4. Photographs or other evidence clearly depicting the facilities where such wildlife will be maintained; and
5. A copy of the applicant's license or registration, if any, under the animal welfare regulations of the U.S. Department of Agriculture (9 CFR Part 2).

ED NOTE: Several A.F.A. members have received permits under the new rules, including Mickey Olsson and Jerry Jennings. It was their experience that the submission of photographs was crucial, and the absence of which delayed issuance until photographs were received.

Thick-billed Parrots

by Arthur C. Risser, Jr.
Curator/Ornithology, San Diego Zoo

That the Carolina parakeet was a native American parrot there is no doubt. Its history of occurrence in the southeastern United States at least was well documented, while the story behind its decline to extinction is speculative at best. Only one other parrot, the Thick-billed Parrot (*Rhynchopsitta p. pachyrhyncha*) has occasionally journeyed into the southern part of the United States, at the northern boundary of its range which is generally the highlands of northern and central Mexico. It is said that the Thick-bills once occurred as far north as northern Arizona in their search perhaps for pine seeds in the forests that capped the mountain ranges of the southwest.

Thick-billed Parrots are bright green in color with the forehead, fore-crown and stripe above the eye a bright red, as are the bend of the wing, carpal-edge and thighs. With its wings outspread, the underwing coverts show yellow while the underside of the flights and tail feathers are grayish. Bill is black and the iris is orange-yellow. A distinct subspecies known as the Maroon-fronted parrot (*R. p. terrisi*) lives in southeastern Coahuila, Mexico. Where the Thick-billed is red on the head, the Maroon-fronted is a maroon brown and is somewhat larger in size.

The mountains of southeastern Arizona provide ideal habitat for the Thick-bills, albeit at the edge of their range. And as is the case with most animal populations, the distributional perimeter is seldom static, but ebbs and flows like water on a coastline. The mountains of southeastern Arizona rise from the desert floor to an elevation of over 9,000 feet. Although this region of the United States is a mosaic of plant communities, the preferred habitat of the Thick-billed Parrot is the pine forest. It has always been an erratic visitor, mainly, in winter, to the mountains of the southeastern part of the state. But with the rapid clearance of pine forests over the major portion of its northern range in Mexico and elsewhere, the Thick-bills former abundant numbers have decreased.

During 1917-1918, in the Chiricahua mountains of Cochise County, Arizona,

there was an invasion of about 1,000 Thick-billed Parrots. These birds consumed large quantities of the seeds of Chihuahua pines (*Pinus chihuahuana*) and then switched to acorns when the pine crop was exhausted. As a graduate student on field investigations in southern Arizona between 1960-1963, I was on the lookout for such avian wanderers and although the coppery-tailed Trogons, an uncommon sight, were seen, and the only cotinga to venture north of the border, the Rose-breasted Becard was noted, the Thick-billed was not encountered. It is likely that the large flocks sighted during the early part of this century, represents the last large-scale invasion for this species in the United States.

In nature, Thick-bills live primarily on the seeds of pine trees (genus *Pinus*) but also consume acorns, fruits and other vegetable matter. They nest between the months of May and August in holes of pine trees high off the ground, most likely utilizing old nests originally carved out by various species of woodpeckers.

At the San Diego Zoo, the Thick-billed Parrot diet consists of safflower and sunflower seeds, a variety of mixed grains (millet, canary, milo, wheat, oat groats), assorted greens (spinach, chard, dandelion, lettuce), and pieces of orange, apple, banana, papaya, chopped carrots and yams (of which the birds take little). Fresh corn on-the-cob, a few peanuts, and trout chow are also provided. Vionate vitamin/mineral powder is provided on bread crumbs. Pine nuts are offered when available.

The hatching and rearing of Thick-billed Parrots in captivity is not a common event. The first recorded breeding of this species in captivity occurred in 1965 at the San Diego Zoo. In March, 1955, a female was received from the Rudkins, well-known southern California aviculturists, and a year later U.S. Customs Service donated a male Thick-billed to the Zoo. It was nine years before this pair was to undertake successful nesting. According to K.C. Lint, then curator of birds, who wrote about this breeding in *Zoonooz* (1966), the



Thick-billed Parrot, *Rhynchopsitta p. pachyrhycha*

aviary in which the birds nested was 8 feet wide, 10 feet deep and about 10 feet high with a wooden box located at the top of the aviary measuring 14 inches wide and 24 inches long with a 6 inch opening. The box was half filled with pine shavings and soil. Courtship was observed to occur over about a 4 week period and included the male feeding the female and abundant vocalizations, especially when the female was in the box calling to the male. On the day of 12 August, 1965, the female was observed to stay in the box, refusing to come out to feed as had been her usual pattern. However, the male flew to the box and fed her by regurgitation. On the basis of these observations, it is suspected that the female laid, on this date, a single white egg. Only the female was noted to incubate the egg. On 8 September, 1965, the egg hatched after an incubation of 28 days. Sixteen days later the chick was removed from the nest and was already developing conspicuous pin feathers. It was fed a diet for the next three months which was being offered to all young parrots, cockatoos and macaws; it is reprinted here for reader information.

CEREAL FORMULA

*Measurements by volume, not weight.
Use standard measuring cup and spoon.*

½ cup Sperry Wheat Hearts

2 fresh egg yolks, stirred in
⅛ teaspoon salt
1 teaspoon Karo corn syrup
½ teaspoon cuttlefish bone meal, fine

Mix thoroughly. Milk or water is added to make a soup-like mixture. Boil over low heat for three to five minutes, stirring gently all the while. Cool until finger-warm. Add one drop Vitamin ABDEC, an aqueous vitamin solution supplement. The formula is fed with a spoon.

Wheat Hearts — a wheat cereal manufactured by General Mills, Inc., Sperry Operations, San Francisco, California.

Crude protein not less than	14.2
Crude fat not less than	3.3
Crude fiber not more than	5.4
NFE not less than	70.7
Ash not more than	1.4

ABDEC Drops — aqueous Vitamin solution manufactured by Parke, Davis & Co., Detroit, Michigan.

As aviculturists are well aware, diets used for feeding young birds vary tremendously from one individual to the next. The best indication of proper growth and development for a young bird is an accurate weight record and for the Thick-billed Parrots an excellent weight record is provided in Clif-

ton R. Witts' article concerning this species in *Watchbird* Volume IV, number 6, Dec./Jan. 1978.

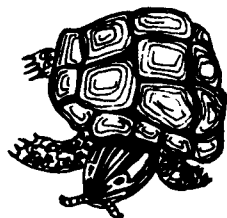
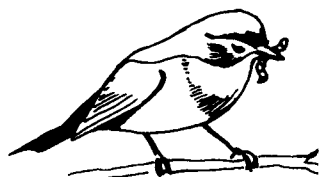
Will Thick-billed Parrots eventually go the way of the Carolina Parakeet? Predictions for its continued long existence in nature are somewhat grim for this endangered species. However, even the infrequent captive breeding successes with this species would seem to indicate that there is at least one option open. The key to captive propagation lies in our ability to provide the species with suitable conditions for reproductions, and cooperative effort in pairing up and exchanging stock to avoid inbreeding.

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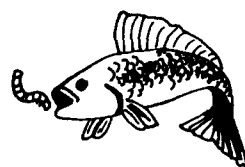
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