Psittacines: What makes a parrot a parrot?

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Psittacines: common behaviors and characteristics

Psittacines are birds that belong to the order Psittaciformes. Common psittacines include budgies, cockatiels, lories, cockatoos, conures, amazons, African greys, lovebirds, senegals, and jardines. Sizes range from 3.5 inches in length (the Buff-faced Pygmy Parrot of New Guinea) to almost 40 inches (the Hyacinth Macaw from South America). Most live in tropical or subtropical areas, although a few may be found in southern temperate zones.

There are three families and 360 species in 80 genera within the order. The three families are:

- Loriidae - lories and lorikeets
- Psittacidae - parrots and parakeets
- Cacatuidae - cockatoos and cockatiels

Physical characteristics

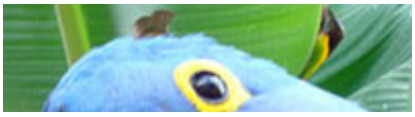
Two characteristics set psittacines apart from other birds. Psittacines have:

- A strong, hooked beak (maxilla) which has a hinge-like flexible attachment to the skull. The beak fits over the lower portion, called the mandible. Psittacines use the beak to aid in locomotion and larger birds also use it for prehension (holding objects).
- Zygodactyl toes (2 point forward and 2 point back). The positioning of the toes is especially useful for climbing and prehension. Psittacines are reportedly the only birds that hold their food in one foot to eat it.

The large beak and arrangement of toes allow psittacines to easily climb among branches in search of food. In addition, psittacines have a large, rounded head; short neck and legs; and usually bright plumage.

Eating and digestion

Psittidae and Cacatuidae have a very muscular tongue, which they use to move food out of the mouth and into the esophagus. The Loriidae have thinner tongues, which they use to collect nectar and pollen from flowers. Since they do use their beaks for cracking open food, they are called "Soft-billed Parrots," however, their beaks are still incredibly tough and strong. The cockatoos have a strong, heavy beak and most of them have a notch in the lower mandible, which allows them to better grasp and crack open their food. Some cockatoos do not feed on seeds and nuts, but on insect larvae.



Psittacines have a crop, which is an enlarged portion of the esophagus that holds the food. In the crop, food starts to be broken down by enzymes and moistened so they may swallow it (birds produce very little saliva). From the crop, food is periodically moved into the proventriculus, which corresponds to our stomach, and

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is sometimes called the "first stomach" or "true stomach." The proventriculus secretes acids and enzymes that further break down the food. The food is then passed into the ventriculus or gizzard. The gizzard is very muscular (except in Loriidae) and works to grind the food into smaller particles so the nutrients can be extracted by the small intestine. As with mammals, secretions from the liver (bile) and pancreas enter the intestine where the final breakdown of the food occurs. Excess water is absorbed toward the end of the intestine, and waste products are stored in the rectum until the bird passes them through the cloaca in combination with waste products from the kidneys.

Hyacinth Macaw

Communication

Most psittacines are social animals that live in families, groups, or flocks, which in the case of budgies, may have up to one million members. As a result of their interactions, psittacines have developed excellent communication skills. Most mate for life, forming very strong bonds. These two characteristics of communication and forming strong bonds, plus their sometimes amazing intelligence, has made them very popular pets. In the home, the people become the bird's family, and frequent interaction with humans is necessary for their well-being.

In addition to the voice, members of the Cacatuidae family have an erectile crest, which they use for communication. If alarmed, excited, or making sexual displays, they will raise the crest. If alarmed, they may also make a hissing sound.

Reproduction

Most species are monomorphic, meaning there are no, or only subtle, outward physical characteristics which can distinguish between male and female birds. In others, the color of the plumage (e.g., Stella's Lory), cere (e.g., budgies), or iris of the eye (e.g., Salmon Cockatoo) may differ by gender.

Scarlet-Chested Parakeet

Hollow logs and tree cavities are the preferred nesting sites of most psittacines, although some use termite mounds. Most species do not line the nest; Lovebirds are an exception. Monk Parrots actually build large nests of twigs and branches with multiple chambers, one for each pair. Psittacines usually lay 2-4 round, white eggs, although smaller species may lay as many as eight. The eggs are incubated by the female, and hatch within 16-35 days, depending upon the species. The newly hatched birds are altricial, which means they are born with eyes closed, have only a fine covering of down, and are totally dependent upon their parents. Both male and female birds usually care for the young, who fledge (leave the nest) in 3 weeks to 4 months. Sexual maturity is reached at 6 months to 6 years, again, depending upon the species. Usually, the larger the bird, the longer these time periods are.

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