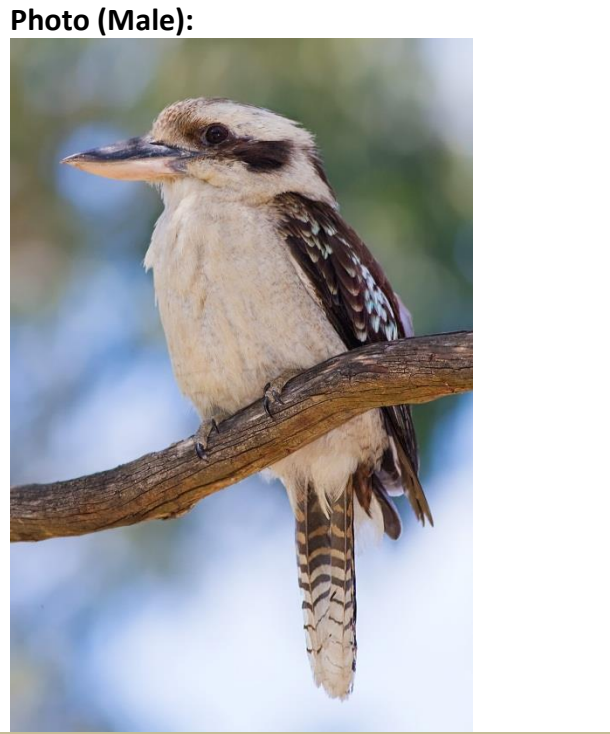


# Species Fact Sheets

**Order:** Coraciformes  
**Scientific Name:** *Dacelo novaeguineae*

**Family:** Dacelonidae  
**Common Name:** Laughing kookaburra

**AZA Management:**  Green  Yellow  Red  None



**NATURAL HISTORY:**

**Geographic Range:** Europe  Asia  North America  Neotropical   
 Africa  Australia  Other

**Habitat:** Forest  Desert  Grassland  Coastal   
 Riverine  Montane  Other [Click here to enter text.](#)

**Circadian Cycle:** Diurnal  Crepuscular  Nocturnal  Other [Click here to enter text.](#)

**Cold Tolerance:** To 70° F  To 60° F  To 50° F  To 40° F   
 To 30° F  To 20° F  Other

In captivity, if provided adequate shelter from wind, rain and snow, kookaburras have demonstrated tolerance to temperatures in the high teens (F) for extended periods of time. They are considered a very hardy species.

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	To 30° F	<input type="checkbox"/>	To 50° F	<input type="checkbox"/>	To 70° F	<input type="checkbox"/>	To 90° F	<input type="checkbox"/>
<b>Heat Tolerance:</b>	To 110° F	<input checked="" type="checkbox"/>	Other	Dependent upon many variables, but species is generally heat tolerant. Over 90 degrees F, sufficient shade and or misting should be provided for relief from heat.				

	Frugivore	<input type="checkbox"/>	Carnivore	<input checked="" type="checkbox"/>	Piscivore	<input type="checkbox"/>	Insectivore	<input checked="" type="checkbox"/>
<b>Diet:</b>	Nectivore	<input type="checkbox"/>	Omnivore	<input type="checkbox"/>	Folivore	<input type="checkbox"/>	Other (Add Below)	<input type="checkbox"/>

### Captive Dietary Needs:

Diets vary in captivity, but commonly offered items include: mice (hoppers are often preferred by many birds over adults), day-old chicks, commercial meat products, strips of beef/ox heart, crickets (previously frozen), zoophobia or extra-large mealworms, earthworms, small snakes, and lizards. Wild kookaburras rarely consume fish, and this component should not comprise a large percentage of the captive diet. Some institutions, however, offer goldfish and smelt as enrichment items. Food items with poor calcium/phosphorus ratios (i.e., beef/ox heart, crickets, mealworms, etc.) should be dusted with purified calcium carbonate (CaCO<sub>3</sub>) prior to feeding. Kookaburras commonly regurgitate pellets, or casts, comprised of un-digestible components in the diet (i.e. exoskeletons, fur, feathers, bones, teeth, etc.). Pellets are formed in the gizzard and are ejected after digestion is complete, usually once a day.

<b>Life Expectancy in the Wild:</b>	Males:	12.5 years (average)	Females:	12.5 years (average)
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<b>Life Expectancy in Captivity:</b>	Males:	15.3 years (median)	Females:	15.3 years (median)
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## BREEDING INFORMATION:

<b>Age at Sexual Maturity:</b>	Males:	1 year	Females:	1 year
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**Courtship Displays:** Courtship consists of three elements: courtship feeding, a nest showing ceremony, and copulation. The first two behaviors usually occur concurrently. Males begin courtship up to six weeks before the first egg is laid. Courtship behaviors are restricted to the breeding pair and are initiated when the female begins to issue a "soft squawk" vocalization when the male appears with a food item. Described as a soft, low monosyllabic sound, this type of vocalization is issued only during the breeding season. Nest site inspection and preparation by the breeding pair is accomplished through a nest showing ceremony that typically begins concurrently with courtship feedings. Both sexes take part in making repeated visits to the nest site. During these visits, the adults may spend a great deal of time in the nest making necessary modifications (i.e. removing debris or increasing the cavity's dimensions). Copulation, the final stage of courtship, involves no special ceremony and often occurs on a favorite perch in close proximity to the nest site.

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## **Nest Site Description:**

Like all kingfishers, kookaburras are cavity nesters. Nest sites are typically located in tree cavities, usually in a Eucalyptus species. However, nest sites have also been recorded in termite mounds, haystacks, cliffs, and on city buildings (Parry 1968). Site fidelity is strong, and unless other birds or mammals take over the nest, the cavity from the previous year is reused. Cavity dimensions vary. Parry noted that nest sites usually have an entrance hole at least five inches in diameter that opens directly into a main chamber which is round in shape with a clearance of at least nine inches. A horizontal cavity with a main chamber that is fairly level with, and directly behind, the entrance is preferred. This type of cavity is thought to assist in the nest sanitation by allowing chicks to defecate directly out the entrance hole (Parry 1968). No nesting material is used. Eggs are laid in a depression on the cavity floor.

A favored perch in close proximity to the nest site acts as a focal point for several activities. Birds use this perch as a launching point when entering the nest, and it is often the first place they alight after exiting. When delivering food to the nest or signaling a change in nest attendance, individuals use this perch as a point to announce their presence. Nest showing ceremonies and copulations often take place from this perch as well.

**Clutch Size, Egg Description:** 2-3 eggs on average; eggs are white and more rounded than elliptical.

**Incubation Period:** 24-29 days

**Fledgling Period:** 32-40 days

## **Parental Care:**

Chicks are cared for by both parents. When auxiliaries care for fledglings, a second brood is possible if environmental conditions permit. Parry noted that pairs without auxiliaries and family groups were almost equally successful in rearing young to the fledgling stage. Pairs with auxiliaries, however, fledge more young than pairs without. Fledgling mortality tends to be higher among chicks of pairs lacking auxiliaries. Increased survivability is seen in older clutch mates which are often fed in preference to younger ones. Higher survival rates among chicks of family groups may be due to the greater amount of care they receive while becoming independent (Parry 1973). The kookaburra is the only cooperatively breeding bird to exhibit siblicide; the death of offspring caused by aggression from siblings in the nest (Legge, 2004). Kookaburra chicks are often aggressive towards their siblings from the moment they hatch as they compete for dominance in the sex-dependent hierarchy. When siblicide occurs, the youngest chick in the nest typically succumbs due to aggression between older siblings. Hatching interval, size at hatching and the sex of the chicks all influence the degree of competitive disparity between the first two nestlings. Short hatching intervals between the first and second chick increase competition between them which nearly always result in the death of the smaller third hatchling (Legge, 2004). Aggression is also higher when hatch weights are similar. If a female is the first to hatch followed by a male, the resulting age

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advantage, size disparity (first eggs are often larger and therefore produce larger chicks), and sex-dependent differences in growth rates are likely to result in more clearly defined dominance between the two, thus reducing aggression.

**Chick Development:** Eggs hatch over several days, hatchling naked, pink and blind. Pin-feathers visible under skin at 4 days and emerge at 7–11 days. Eyes open after 10 days, feathers on body break out of sheaths after 17–22 days; head feathers, remiges and rectrices emerge after 22–27 days.

## CAPTIVE HABITAT INFORMATION:

**Social Structure in the Wild:** Pairs or family groups

**Social Structure in Captivity:** Kookaburras are highly territorial. Mostly kept in pairs but can also be maintained as family groups if exhibit size and temperament of adults allows.

**Minimum Group Size:** 1 pair

**Maximum Group Size:** Dependent upon exhibit size.

**Compatible in Mixed Species Exhibits:**

Varies

**Comments:**

The success of mixed-species exhibits containing kookaburra is highly dependent upon the space, enclosure design and, most importantly, the temperament of all species involved. The following is a list of species that have been successfully exhibited with kookaburras (both breeding and non-breeding):

- Red lory
- Masked plover
- Blue-crowned pigeon
- Nicobar pigeon
- Milky stork
- Abdim's stork
- Magpie robin
- Tawny frogmouth
- Bali mynah
- Gold-crested mynah
- Sacred ibis
- Derbyan parakeets
- Chestnut teal
- Rothschild peacock pheasant
- Javan whistling duck
- Bush stone-curlew
- White-necked (Sulawesi) mynah
- Rainbow lorikeets

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- Other lorikeet spp.
- Australian crested pigeon
- Lesser sulphur-crested cockatoo
- North Island Brown Kiwi
- White-winged wood duck
- Purple swamphen
- Blue-faced honeyeater
- Straw-necked ibis
- Pied imperial pigeon
- White-crested laughing thrushes
- Cattle egret
- Green-winged dove
- Plumed (Eyton's) whistling duck
- Australian kestrel
- Pacific baza

Due to their predatory nature, exhibiting kookaburras with small parakeets (i.e. Budgerigar, Scarlet-chested parakeet, etc.), finches (i.e. Zebra finch, Gouldian finch, or any other Australasian finch species) or similar-sized bird species is not recommended. Kookaburras will readily kill and consume small birds. Conversely, exhibiting kookaburra with larger, predatory birds (i.e. owls, raptors) should be avoided at all costs.

Many of the more successful mixed-species exhibits are large spaces which are well-planted and provide sufficient shelter, food resources, spatial separation, and nesting opportunities.

**Optimal Habitat Size:** The author recommends a minimum enclosure size of 10' x 10' x 8' for a pair of kookaburra. Larger spaces are desirable to elicit a broader range of natural behaviors and to allow sufficient room for flight.

**Management Challenges:** Kookaburra are monomorphic and should be DNA sexed for confirmation of gender. Single-sex pairings or groups are not recommended unless birds are related and raised together as chicks. Kookaburras are highly territorial and introductions between con-specifics should occur in a neutral location where birds can be housed side-by-side until behaviors indicate the appropriate time for introductions (e.g., mutual feedings, chorusing in close proximity, "soft squawk" vocalizations, and/or perching close together for prolonged periods). Side-by-side enclosures should be arranged such that the birds have the opportunity to be in close proximity to each other next to the dividing barrier while also allowing sufficient space and perching for adequate separation should they desire more privacy. Birds should be kept in adjacent areas until staff observe and assess the birds'

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behaviors and interactions over a period of time. They should be closely monitored during introductions in case there is a need to separate due to aggression. Even seemingly compatible birds may become aggressive when introduced. While minor beak-grabbing and displacement from perches may occur during initial introductions, keepers should closely monitor for more aggressive behaviors, such as one bird grabbing and twisting at the neck of the other and/or forcing it to the ground while continuing an attack. These latter behaviors can easily lead to physical trauma to the less dominant bird, and introductions should be discontinued if they persist.

Time and patience are important ingredients to successful introductions, and separating birds for the first few nights of an introduction, even if aggression is not noted, is usually advised. If kept in side-by-side enclosures with close proximity and with good visibility between them, the birds should maintain a level of familiarity and not set the introductions back to the initial steps.

Minimizing competition for important resources (e.g., food, perching, etc.) may also facilitate introductions.

Reintroducing hand-reared offspring to should not be attempted since there would be no recognition of relatedness and the adults would react aggressively as if the young birds were intruders into their territory.

### ADDITIONAL COMMENTS:

Click here to enter text.

### REFERENCES:

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Date: 6/9/2014