

# Sugar glider

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The **sugar glider** (*Petaurus breviceps*) is a small gliding possum originating from the marsupial Infraclass.<sup>[3][4][5]</sup>

The sugar glider is native to eastern and northern mainland Australia (as well as being introduced to Tasmania) and is also native to New Guinea and the Bismarck Archipelago.

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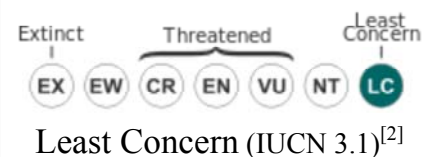
## Habitat

Sugar gliders can be found throughout the northern and eastern parts of mainland Australia, and in Tasmania, Papua New Guinea, and Indonesia. They can be found in any forest where there is food supply but are commonly found in forests with eucalyptus trees. They are nocturnal, meaning they sleep in their nests during the day and are active at night. At night, they hunt for insects and small vertebrates and feed on the sweet sap of certain species of eucalyptus, acacia and gum trees.<sup>[6]</sup> The sugar glider is named for its preference for nectarous foods and its ability to glide through the air, much like a flying squirrel.<sup>[6][7]</sup>

### Sugar glider<sup>[1]</sup>



### Conservation status



### Scientific classification

Kingdom:	Animalia
Phylum:	Chordata
Class:	Mammalia
Infraclass:	Marsupialia
Order:	Diprotodontia
Family:	Petauridae
Genus:	<i>Petaurus</i>

When suitable habitats are present, sugar gliders can be seen 1 per 1,000 square metres provided that there are tree hollows available for shelter. They live in groups of up to eight adults, plus the current season's young, all sharing a nest and defending their territory, an example of helping at the nest. A dominant adult male will mark his territory and members of the group with saliva and a scent produced by separate glands on the forehead and chest. Intruders who lack the appropriate scent marking are expelled violently.<sup>[6]</sup>

## Appearance and anatomy

The sugar glider has a squirrel-like body with a long *partially*<sup>[8]</sup> prehensile tail. The males are larger than the females and have bald patches on their head and stomach; their length from the nose to the tip of the tail is about 24 to 30 cm (12–13 inches, the body itself is approx. 5–6 inches). A sugar glider has a thick, soft fur coat that is usually blue-grey; some have been known to be yellow, tan, or albino. A black stripe is seen from its nose to midway of its back. Its belly, throat, and chest is a cream colour.

It has five digits on each foot, each having a claw, except for the opposable toe on the hindfeet. Also on the hindfeet, the second and third digits are partially syndactylous (fused) together to form a grooming comb.<sup>[9]</sup> Its most striking feature is the patagium, or membrane, that extends from the fifth finger to the first toe. When legs are stretched out, this membrane allows it to glide distances of 50–150 metres. This gliding is regulated by changing the curvature of the membrane or moving the legs and tail.<sup>[10]</sup>

Another feature are the scent glands, located on the frontal (forehead), sternal (chest), and paracloacal (cloaca). These are used for marking purposes, mainly for the males. The frontal is easily seen on adult males as a bald spot. The male also has a bifurcated (two shafts) penis. The female has a marsupium (pouch) in the middle of her abdomen to carry offspring.<sup>[9]</sup>

## Torpor

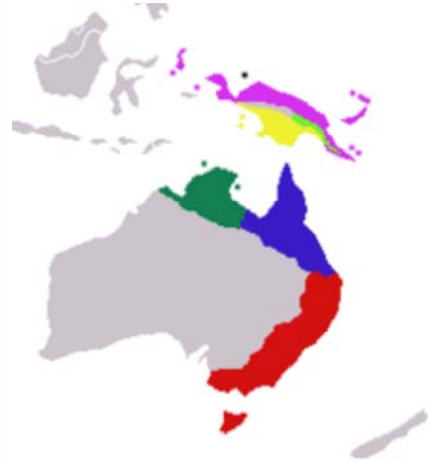
During the cold season, drought, or rainy nights, a sugar glider's activity is reduced. This is usually seen due to torpor. In the winter season or drought, there is a decrease in food supply, which is a challenge for this marsupial because of the energy cost for the maintenance of its

Species: *P. breviceps*

**Binomial name**

*Petaurus breviceps*

Waterhouse, 1839



**Sugar glider natural range:**

Red: *P. b. breviceps*

Blue: *P. b. longicaudatus*

Dk *P. b. ariel*

Green:

Gold: *P. b. flavidus*

Magenta: *P. b. papuanus*

Lt Green: *P. b. tafa*

Black: *P. b. biacensis*

metabolism,<sup>[11]</sup> locomotion, and thermoregulation. With energetic constraints, the sugar glider will enter into daily torpor for 2–23 hours while in rest phase.<sup>[12]</sup> However, before entering torpor, a sugar glider will reduce activity and body temperature normally in order to lower energy expenditure and avoid torpor.<sup>[11][13]</sup>

Torpor, which is seen as an emergency measure, allows the animal to save energy by allowing its body temperature to fall to a minimum of 10.4 °C<sup>[12]</sup> to 19.6 °C.<sup>[14]</sup> When the food is scarce, as in winter, heat production is lowered in order to reduce energy expenditure.<sup>[15]</sup> With low energy and heat production, it is important for the sugar glider to peak its body mass by fat content in autumn (May/June)<sup>[16]</sup> in order to survive the following cold season. In the wild, sugar gliders enter into daily torpor more often than sugar gliders in captivity.<sup>[13][14]</sup>

## Diet and nutrition

Like many exotic animals, the sugar glider can suffer from calcium deficiencies if it is not fed an adequate diet.<sup>[17]</sup> Calcium to phosphorus ratios should be 2:1 to prevent hypocalcemia, sometimes known as hind leg paralysis (HLP).<sup>[18]</sup>

In the wild, gliders live off gum and sap (typically from the eucalyptus), acacia trees, nectar and pollen, manna and honeydew and a wide variety of insects and arachnids. A captive glider's diet should be 50% insects (gut-loaded) or other sources of protein, 25% fruit and 25% vegetables.<sup>[19]</sup>

Some of the more recognized diets are BML, HPW, various calcium rich diets and LBM. These diets are proper protein supplements for captive sugar gliders.<sup>[citation needed]</sup>

## Breeding

The age of sexual maturity in sugar gliders varies slightly between the males and females. The males reach maturity between 4–12 months old, while females reach maturity between 8–12 months. In the wild, sugar gliders breed once or twice a year depending on the climate and habitat conditions, while they can breed multiple times a year in captivity as a result of consistent living conditions and proper diet.<sup>[9]</sup>

A sugar glider female has one (19%) or two (81%) joeys a litter. The gestation period is 15 to 17 days, after which the baby sugar glider (0.2 g) will crawl into a mother's pouch for further development. It is virtually unnoticeable that the female is pregnant until after the joey has climbed into her pouch and begins to grow, forming bumps in her pouch. Once in the pouch, the joey will attach itself to its mother's nipple, where it will stay for about 60 to 70 days. The joey gradually spills out of the pouch until it falls out completely. The mother can get pregnant while her joeys are still in (in pouch) and hold the pregnancy until the pouch is available. Their eyes will remain closed for another 12–14 days, and they are virtually furless at first. During

this time, they will begin to mature by growing fur and increasing gradually in size. It is about two months for the offspring to be completely weaned off of the mother, and at four months, they are on their own.<sup>[9]</sup>

## Conservation status

Unlike many native Southern Australian animals, particularly smaller ones, the sugar glider is not endangered.<sup>[20]</sup> Despite the massive loss of natural habitat in Australia over the last 200 years, it is adaptable and capable of living in surprisingly small patches of remnant bush, particularly if it does not have to cross large expanses of clear-felled land to reach them. Several close relatives, however, *are* endangered, particularly Leadbeater's Possum and the Mahogany Glider. The sugar glider is protected by law in South Australia, where it is illegal to keep them without a permit<sup>[21]</sup> or to capture or sell them without a licence (which is usually only issued for research).

## As pets

Around the world, the sugar glider is a popular domestic pet, but is one of the most commonly traded wild animals in the illegal pet trade, where animals are plucked directly from their natural habitats.<sup>[22]</sup> In Australia, sugar gliders can be kept in Victoria, South Australia and the Northern Territory but not Western Australia, New South Wales, the Australian Capital Territory, or Tasmania.<sup>[23]</sup>

Sugar gliders are popular as pets in the United States, where they are bred in large numbers. Most states and cities allow sugar gliders as pets, with some exceptions including California,<sup>[24]</sup> Hawaii, Alaska, Pennsylvania, Massachusetts and Minnesota.<sup>[25]</sup>



Male sugar glider on a table

## Taxonomy

There are seven subspecies of *P. breviceps*:

- *P. b. breviceps* (Waterhouse, 1839)
- *P. b. longicaudatus* (Longman, 1924)
- *P. b. ariel* (Gould, 1842)
- *P. b. flavidus* (Tate & Archbold, 1935)
- *P. b. papuanus* (Thomas, 1888)
- *P. b. tafa* (Tate & Archbold, 1935)
- *P. b. biacensis* (Ulmer, 1940)

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6. ^ <sup>a b c</sup> "Sugar Glider" (<http://www.dpiw.tas.gov.au/inter.nsf/webpages/bhan-53j8xs?open>) . Department of Primary Industries and Water, Tasmania. 28 October 2009. <http://www.dpiw.tas.gov.au/inter.nsf/webpages/bhan-53j8xs?open>. Retrieved 22 June 2010.
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## External links

- Gliders in the Spotlight (<http://www.wildlife.org.au/wildlife.php?page=w-gliders1.html>) —Wildlife Preservation Society of Queensland
- Sugar Glider (<http://www.australianfauna.com/sugarglider.php>) —Australian Fauna
- Information about the Sugar Glider (<http://www.parks.tas.gov.au/wildlife/mammals/sugglid.html>) from Tasmanian Parks

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