

# The Secret Lives of Sugar Gliders



*With Chris and Sandra Pollitt*

Hidden from the glare of the summer sun, tucked away in the cool boles and the hollow limbs of mature eucalypt trees, live clans of Sugar Gliders.

Sleeping, huddled together, pink noses buried in the grey and black fur of their fluffy tails, groups of up to ten males, females and youngsters rest, far from the prying eyes of humans. Charming little creatures – common, hardy, and versatile – they are the gems among their beautiful relatives, the possums and gliders of Australia. In their secret world of the forest canopy, they wake precisely at dusk and commence a strictly nocturnal lifestyle.

Often taking a running jump from the end of a branch of the rest tree, they will glide or volplane nearly fifty metres to neighbouring food trees. Thus they exploit patchy food reserves without having to travel the more hazardous route between trees on the ground.

From tree to tree they glide, seeking out the blossoms of flowering forest trees – eucalypts, grevilleas, banksias, eugenias and hakeas – from which they take the nectar. Much time may be spent drinking the sap which flows from the incision sites made on the trunks of eucalypts such as the bloodwood and stringybark by their more robust cousins the Yellow Bellied Gliders. Needle sharp claws and long agile fingers tear and probe loose bark to search for crunchy insects and spiders. On finding one of these delicacies, a Sugar Glider sits back on its haunches and uses its dexterous fingers to hold the tasty morsel and deliver it, fragment by fragment,

*Above:*

At dusk, the Sugar Gliders leave the security of their leaf-lined nest in the hollow trunk or branch of a mature eucalypt tree to forage in the tree tops. With increasing logging and land clearing, suitable habitat trees with hollow limbs are becoming scarce.

*Right:*

In Spring, the diet of Sugar Gliders includes insects, to provide protein essential for the coming breeding season. Beetles, moths, phasmids and spiders are all voraciously devoured, but ants and centipedes are avoided. Here a Sugar Glider is chewing the body of a moth while its dexterous fingers hold the remaining wing.





to its busy jaws. In Spring, this extra protein is an important item in the Sugar Glider diet, helping to meet the energy demands of the breeding season.

Twin baby Sugar Gliders are born after a gestation period of only sixteen days. Like all marsupial young they are born in a relatively immature state, but are able to climb into their mother's pouch, where each attaches to one of the two pouch nipples.

After eighty days the eyes open. At ninety days fur has grown, and the babies are beginning to leave the pouch and explore their surroundings. As they grow too large to climb back inside the pouch they are left behind in the leaf nest, but they will continue to suck from the nipples until they are old enough to forage in the tree tops with their mother.

Members of a Sugar Glider clan are gregarious creatures – gentle with one another and often sharing food items. An individual who has caught a delicacy such as a large stick insect will welcome an approaching clan member to share a leg or two.

The clan is usually dominated by a large male, who makes sure each member is marked by the clan scent by rubbing oil from a gland on his forehead over the fur of his cohorts. A similar gland is situated in the centre of his chest, and oily secretions from

*Top:*

In the safety of its leaf-lined nest, a sleepy Sugar Glider grooms its fur with the fused digits ('syndactylous claw') of a hind foot.

*Centre and Left:*

Sugar Gliders live in social groups or clans, even sharing food with clan members, which they identify by odour. The light patch in the centre of the dark forehead stripe is the site of the scent-producing frontal oil gland. Members of the clan rub their foreheads on each other so that they all share a common scent.



**Right:**  
Nectar from the blossoms of flowering eucalypts, such as this *E. curtisii*, provide Sugar Gliders with a valuable part of their diet. *E. curtisii*, or Brisbane Mallee, once flourished on the hillsides of the Brisbane River Valley, but sadly, with the spread of urban development, it has disappeared. This Sugar Glider is sipping nectar from the cup in the centre of the flower.



**Above:**  
A Sugar Glider at the moment of take-off. To volplane, a Sugar Glider thrusts powerfully with its hind limbs and spreads its forelimbs wide apart to stretch the gliding membranes.



**Above:**  
A volplaning Sugar Glider descends into a black wattle to feed on acacia gum — an important source of protein in its diet. Sugar Gliders can volplane up to fifty metres between trees in their search for food. The gliding membrane or patagium stretches from the fifth finger to the first digit of the hind foot, and by altering the elevation of its patagium, and using its tail as a rudder, the Sugar Glider can steer with remarkable accuracy.

**Opposite:**  
As it approaches the target tree, the volplaning Sugar Glider suddenly brings all legs forward underneath its body and effectively stalls, to land safely with all four feet in contact with the trunk. At the moment of impact it throws back its head to avoid it striking the tree.

## The Sugar Gliders

*The sugar gliders glide from tree to tree to feed their babies one by one so when they grow up they can spread their wings and sing all their happy thoughts.*

*Amy Rudder, 7 years  
Daceyville, Victoria*

the cloaca release a powerful scent with which he marks the nest and strategic points within the clan's surrounding three- to six-hectare territory.

This territory is fiercely defended by all the clan members against encroachment from neighbouring clans. Any stranger foolish enough to trespass is recognised as a foreigner by its alien scent and is bitten and chased away. Sometimes it will be a fight to the death between dominant males.

It is believed that Sugar Gliders

have evolved nocturnal activity for one good reason: to avoid predators. Gathering their food, the resinous sap of eucalypts, the gum of wattle trees, and the nectar from flowering trees, Sugar Gliders are led into very exposed positions where by day they would be prime targets for predators such as hawks and eagles. But at night predation pressure is less — though owls and the occasional kookaburra include Sugar Gliders in their diet. An effective nocturnal camouflage is the black stripe which runs from head to tail along the Sugar Glider's back — resembling the moonlit shadows cast by hanging eucalyptus bark and the vertical trails of sap which flow from the feeding sites on the trunk of the trees.

As the light of daybreak penetrates the gloom of the tree tops, the members of the clan return from their food gathering forays to congregate in the communal nest.


If the nest is in need of maintenance or a little extra insulation, one of the clan members will return to the tree tops and nibble off some bunches of leaves. Gathering the bunch in its hands, it passes it along its belly to its tail, which curls tightly round the leaves. When it has gathered sufficient, the little creature scampers — its load clutched in the curl of its tail — back to the nest, where the leaves are used to make the necessary repairs.

The dawn return to the nest is accompanied by greetings and rituals of scent marking. These over, grooming begins. The animals lick their paws and wash their faces in a manner similar to the familiar domestic cat. When this is done, they comb their fur. The digits of the second and third toes are fused, but the paired claws of the two digits protrude to form a comb. With fast backward and forward movements of their hind legs the Sugar Gliders groom their fur, each pausing now and then to lick the comb, cleaning it and moistening it with saliva before continuing with the combing operation.

Although not an endangered species, these delightful creatures are disappearing from much of their former range because the large mature habitat trees, the ones with branches made hollow by termites, are also sought after by thoughtless timber getters. They survive well in shade strips and tree corridors if a few old or dead trees are left to provide nesting sites.

Flowering eucalypts and acacias planted in the suburbs of our larger cities tend not to support Sugar Gliders because the trees are usually too young to bear suitable nest hollows. You can encourage Sugar Gliders and other possums and gliders to colonise your local forest area or bush garden by providing nest boxes. For Sugar Gliders the entrance to boxes should be about 5–7 centimetres diameter.

Your reward, the sight of a Sugar Glider volplaning from tree to tree, steering by raising and lowering its arms, using its tail as a rudder, is one of those magic moments of the Australian environmental experience — treasured, never to be forgotten.



Have you written a poem or a story or drawn a picture about nature? — Send it to us, and we may be able to publish it!