

Iguanas of the

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Two species of iguana inhabit the islands of the Fiji group: one, the crested iguana, was discovered as recently as 1979 and the other, the banded iguana, once common enough to be an important source of food for humans, is now listed in the IUCN *Red Data Book*. The author, in his three-year study, discovered that both species still exist in relatively dense populations on a few, small uninhabited islands, although they have disappeared from those that are developed. He discusses the threats to their survival and the conservation efforts being made.

The iguanine genus *Brachylophus* of Fiji and Tonga is of considerable biogeographical interest in being the only true iguana (sub-family Iguaninae) found outside the Americas. *Brachylophus* is also of great interest on account of its strikingly beautiful appearance, and its rarity in museum and zoological collections. At present two species are recognised; the banded iguana *Brachylophus fasciatus* (Brongniart, 1800) and the crested iguana, *B. vitiensis* (Gibbons, 1981). The former is widely distributed throughout Fiji Group and, probably, Tonga also. In addition, a wild population is known to exist on Efate Island in Vanuatu, but this probably represents a recent introduction (Gibbons, 1981). The latter is restricted to a few very dry rainshadow islands in the north-west of the Fiji Group including Yaduataba and the Yasawas (Figure 1).

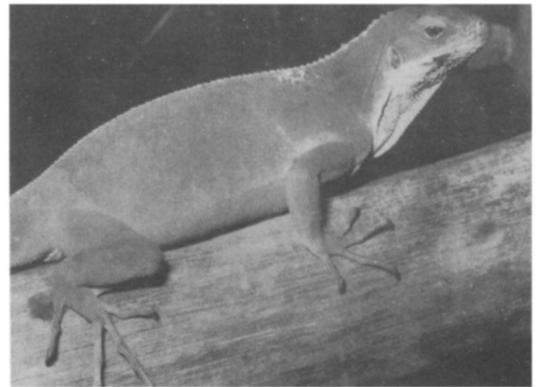
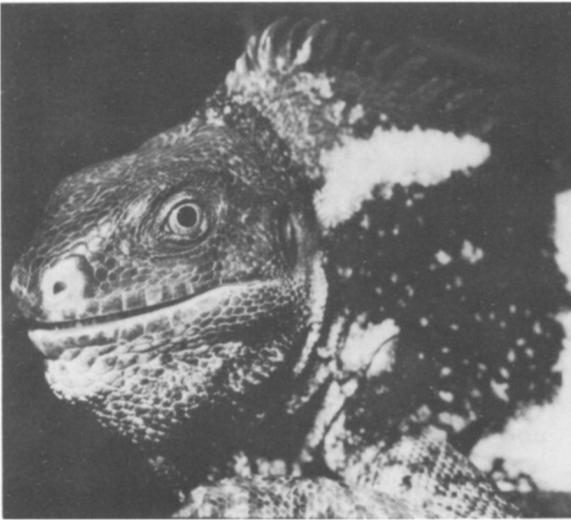
The two species are readily distinguished. The crested iguana has a well-developed crest of soft,

brown spines, narrow white bands bordered by black, and is generally much larger and higher at the shoulder than the banded iguana. Sexual dimorphism is lacking, and both sexes exhibit extreme colour lability, from light green when sleeping or in shade to greyish-black when aroused during aggressive or sexual encounters. The banded iguana has a feeble crest of spines, the longest not exceeding 0.3 cm, broad bluish-white bands and a smaller, more slender body than the crested iguana. Sexual dimorphism is marked, most females either having a reduced banding pattern, or none at all and a small, pale dewlap. Colour change, though marked, is never as great as in the crested iguana, the maximum darkening possible being a chocolate brown. More detailed information on species differences, including ethological as well as morphological data are given elsewhere (Gibbons, 1981; Gibbons and Watkins, 1982).

Information on the biology of the banded iguana, especially on its distribution, abundance and habits in the wild is extremely limited. Most publications on the animal have been written by overseas scientists on short visits to Fiji or Tonga (e.g. Bustard, 1970; Cogger 1974) or by local naturalists with little opportunity for full-time study (e.g. Cahill, 1970). All are in agreement that the banded iguana is now uncommon or rare on most islands. Indeed, the species is listed as endangered in the *IUCN Amphibia and Reptilia Red Data Book* (Honegger, 1975). There is reliable evidence (Williams, c. 1843–45; Tischner, 1965) that the banded iguana was quite common, at least on Viti Levu, until late in the nineteenth century. A major reason cited for this decline has been the introduction of the Indian

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Top left: Crested iguana; in this species males and females have similar colour patterns (*John Gibbons*).

Top right: Male banded iguana; note the broad bands and feeble crest (*John Gibbons*).

Below: Female banded iguana; note the lack of bands (*John Gibbons*).

mongoose *Herpestes auro punctatus* to Fiji in 1883 (Gorman, 1975), and Bustard (1970) has stated that *Brachylophus* is 'rare throughout almost all its range'.

The present paper presents a re-assessment of the above conclusions based on a three-year study of iguanas throughout the Fiji Group. A detailed account is given on the ecology and conservation of the iguanas of the South Pacific

conservation of the crested iguana population on Yaduataba Island, which represents the only field study on *Brachylophus* yet undertaken.

Distribution and abundance

Contrary to Bustard (1970), *Brachylophus* is not rare throughout almost all its range. The population of *B. vitiensis* on Yaduataba is extremely

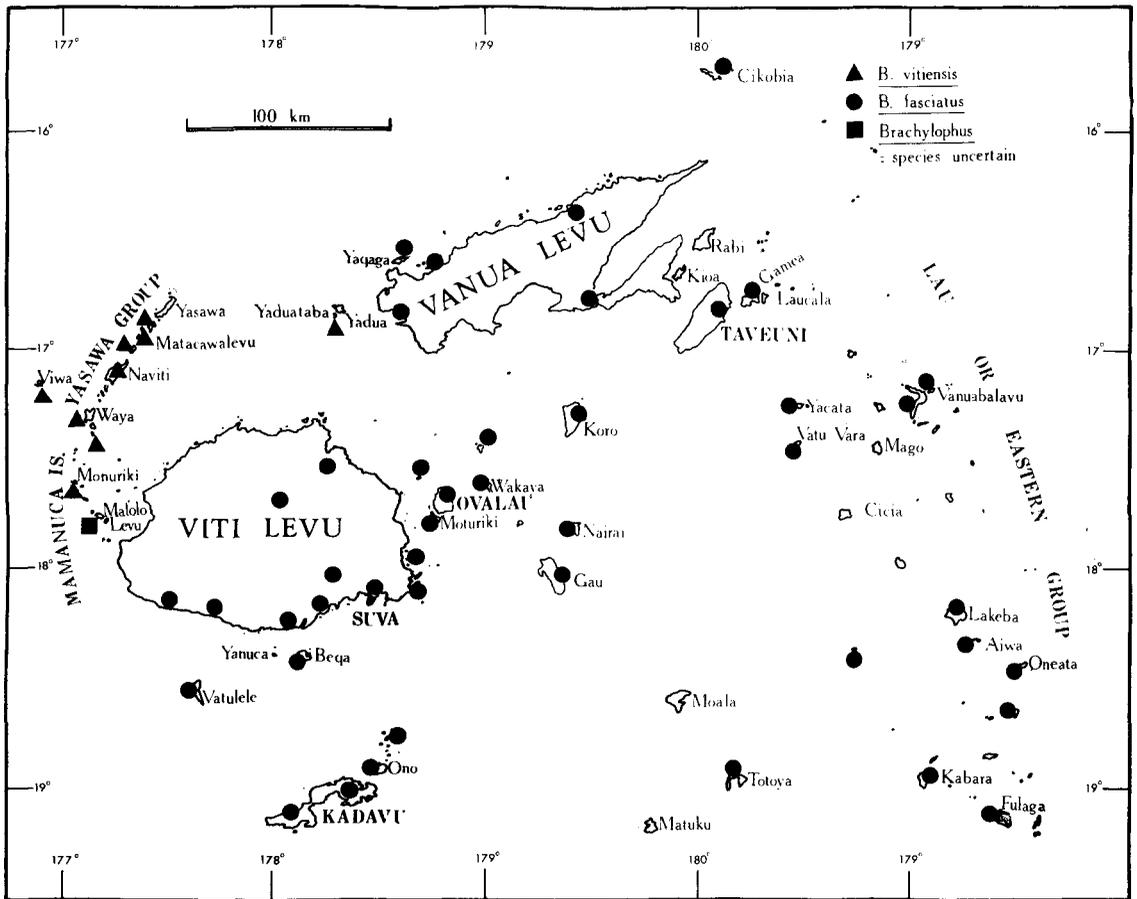


Figure 1. Map of the Fiji Islands showing the distribution of the banded iguana *Brachylophus fasciatus* and the crested iguana *B. vitiensis*.

dense, well in excess of 300 animals occupying an area of 0.7 sq km. There are strong indications that a small number of uninhabited islands, including Vatu Vara and Aiwa in the Lau Group contain relatively dense populations of *B. fasciatus*. On many islands, including Koro, Nairai, Kadavu, Ovalau and Yacata, the banded iguana is encountered on a fairly regular basis by Fijians. Several specimens have been sent to Suva from each of these islands during the past three years. This species seems less common on many other islands, but populations still occur throughout most of the coastal area of southern Viti Levu. Occasional sightings of the banded iguana have been made within metropolitan Suva in the last decade. This is not to say that the average person might expect to see an iguana,

even after a detailed search in the 'right' habitat, since the animals are extremely well camouflaged.

One of the major problems in working out distribution of *Brachylophus* has been the complete lack of museum records of specimens from the wet, forested interiors of the two main islands. Indeed, until recently, the available hard evidence indicated that *Brachylophus* was almost exclusively a coastal species (see Gibbons and Watkins, 1982). This was puzzling because there is much historical evidence that iguanas were once a widespread food item in the interior of Viti Levu. The Reverend Thomas Williams (c. 1843–45) gives the following account:

'... a chief from Dari Vungalei who with his father-in-law were served with food consisting in part of cooked guanas—there
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was one for each of them—unhappily the chief in passing on the guana intended for his father-in-law broke off part of the tail and ate it. For this the angry father-in-law watched (for) an opportunity and slew him telling him before he did what was his motive’.

Theodor Kleinschmidt’s 1877–78 account of Viti Levu (Tischner, 1965) also includes reference to the banded iguana. On page 380, he states, in translation:

‘Lizards, tree-geckos and *Clorescartes* (= *Brachylophus fasciatus*) are eaten. From the *C. fasciatus* the natives collect the leathery eggs. These eggs are cooked and the empty shells are blown up and placed on a stick for decoration inside a house. . . .’

This puzzle was further complicated by reports (Boulenger, 1887) of an agamid lizard *Gonocephalus godeffroyi*, which superficially resembles *Brachylophus*, on Viti Levu. Even though some herpetologists doubted the existence of a natural population of this species in Fiji (Pernetta and Watling, 1978), lingering uncertainty remained as to the identity of Williams’s ‘guanas’. The problem was finally solved when a specimen of *Brachylophus fasciatus* collected at Monasavu (altitude c. 1000 m) in the wet rain forest interior of Viti Levu was brought to Suva in 1981.

The crested iguana *B. vitiensis* remained unknown to science until its discovery in 1979 on Yaduataba. For nearly two years thereafter no other populations were known. However, in late 1980 the species was found on Matakawalevu Island in the Yasawas. Very recently (October 1982), additional populations were confirmed throughout the Yasawas and on Monuriki Island in the Mamanuca Group. The latter almost certainly represents the southerly limit of the species. On nearby Malolo Levu Island some 12 km to the south-east, there is a population of *Brachylophus* of uncertain taxonomic status. The single specimen in the Fiji Museum collected in late 1980 conforms neither to *B. fasciatus* nor *B. vitiensis*, having characteristics of both species. For example, the size, crest structure and dewlap are *vitiensis*-like, but the colour pattern is as for *fasciatus*. Very recently, two further, similar specimens have been captured (Errol Fifer, pers. comm.). Whether this population will be considered a new, intermediate species, or subspecies of either the crested or banded iguana remains open to question. What does seem certain is that it represents an evolutionary

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intermediate between typical *B. fasciatus* and *B. vitiensis* (see Gibbons, 1981).

For both species, the present-day distribution is very patchy. For example, iguanas are unknown on many of the more developed, populated islands in the Mamanuca Group, and they are seldom seen on other islands except for Monuriki. The patterns of distribution of the two species indicate that *vitiensis* is restricted to dry islands with low winter rainfall (May–October), while *fasciatus* occupies a whole range of habitats from dry beach forest to wet rain forest experiencing more than 500 cm annual rainfall. Significantly, Malolo Levu is considerably wetter than Monuriki, Yaduataba or the Yasawas, and unlike these other islands supports a population of the introduced cane toad *Bufo marinus*.

Causes of decline

Nineteenth-century accounts of the banded iguana in Viti Levu noted earlier leave no doubt that the species was very common in former times. Now eggs are extremely difficult to find even for relatively dense *Brachylophus* populations. What were the causes of this decline? For many declining or disappearing species, habitat destruction and/or killing by man are the primary causes. While both of these factors may be important in small local areas, neither seems adequate to explain the very widespread and rapid decline of *Brachylophus* iguanas throughout Fiji. Nor can all the blame be put on the introduced mongoose, since this animal is only present on the two large islands, Viti Levu and Vanua Levu, and on Rabi, Beqa and Yanuca (relatively recent introduction).

The answer lies in looking at the native and introduced animals on a whole series of islands throughout the Fiji Group, including both inhabited and uninhabited ones. In this way, each island becomes an experimental laboratory with variable numbers and kinds of introduced animals. Those that lack introduced animals—a rarity these days—are equivalent to ‘controls’. The results are revealing. In Table 1, I have included only those introductions which are considered to have had an effect on iguanas, either directly by predation, or indirectly by destruction of iguana habitat.

Table 1 is helpful in suggesting some of the causes of decline. These include:

(i) Feral populations of cats have become established on virtually all inhabited islands in the Fiji Group. Cats were first introduced to Fiji in the early 1800s and by the 1870s they had become so numerous in the interior of Viti Levu that they were hunted for food by the Fijians. Take, for instance, Theodor Kleinschmidt's statement on cats during the years 1877–78 (see Tischner, 1965, p. 379).

'I have not seen any cats in houses in the interior of Viti Levu, but there are many wild ones in the bush. The natives hunt for them with dogs and guns, because their meat is said to be very good. The skulls are kept as trophies and I found many of these skulls in the area of the Upper Wainimala and Wainamu.'

Since that time the cat population on the two larger islands seems to have itself declined, presumably because food items like birds, iguanas and other lizards were no longer so abundant as in former times. There is no doubt that feral and semi-wild cats have had a very marked effect on lizard populations, especially skinks. On cat-free islands like Monuriki and Yaduataba, there are not only high densities of iguanas but also of larger species of *Emoia* skinks. On Yadua which is only 120 m distant from Yaduataba, but which harbours cats, both iguanas and large *Emoia* are rare. On islands where there are tourist resort

operations like Galito (Castaway Resort, 1 km west of Malolo Levu) and Malolo Lailai (a small island separated from Malolo Levu by a shallow tidal channel, and the location of Plantation Resort and Dick's Place) where there are high cat densities, large *Emoia* and *Brachylophus* are very rare or extinct, even though there is still abundant forest on Galito.

I consider feral cats the single most important factor responsible for the decline of *Brachylophus* and several other lizard species in Fiji. Surprisingly, feral cats are not even mentioned by Bustard (1970) and Cogger (1974), and their existence in Fiji is doubted by Pernetta and Watling (1978), though the latter authors have subsequently agreed in personal communications that feral cats are indeed widespread.

(ii) The role of feral pigs in affecting *Brachylophus* populations is uncertain, but if anything is probably greater than generally realised. In other parts of the world, particularly certain islands of the West Indies, pigs are important predators of iguana eggs which are buried in the ground. Such a situation may occur in Fiji. Feral pigs are present on nearly all inhabited islands that contain forest.

(iii) The impact of mongooses on the wildlife of Viti Levu and Vanua Levu is better understood and documented than that of either cats or pigs.

Table 1. Presence of introduced animals in relation to iguana abundance.

Island	Feral cats	Feral pigs	Free ranging goats	Mongoose	Status of iguanas	Comments
Viti Levu	+	+	–	+	Rare	Inhabited, large
Vanua Levu	+	+	–	+	Rare	Inhabited, large
Taveuni	+	+	–	–	Rare	Inhabited
Yaqaga	+	+	+	–	Rare	Inhabited
Ovalau	+	+	–	–	Frequent	Inhabited
Kadavu	+	+	–	–	Frequent	Inhabited
Matacawalevu	+	?	–	–	Frequent	Inhabited
Vatu Vara	?	–	–	–	Abundant	Uninhabited
Devilau ¹	–	–	+	–	Rare or extinct	Uninhabited, goats long established
Yadua	+	+	+	–	Rare or extinct	Inhabited
Yaduataba	–	–	+	–	Abundant	Goats recent, uninhabited
Galito	+	–	–	–	Rare or extinct	Tourist island, many cats
Malolo Laila ¹	+	–	–	–	Rare or extinct	Tourist island, many cats
Monuriki	–	–	+	–	Frequent	Goats recent, uninhabited

1. For explanation of location, see text.

Undoubtedly, mongooses have had a drastic effect on ground nesting birds, and some reptiles, particularly diurnal forms which are only partially arboreal. Birds such as the banded rail *Rallus philippensis* are rare or absent on the two main islands, but common elsewhere. The large, primarily ground dwelling skink *Emoia nigra* is rare or absent in most localities in Viti Levu and Vanua Levu but common on many nearby islands to the east such as Ovalau, Koro and Gau. Even some of the small highly ubiquitous species of skink such as *Emoia cyanura* are markedly less common on the main islands than elsewhere. Since the banded iguana descends to the ground to move across broken habitat and to lay eggs, predation by mongooses is likely to have been an important cause of the species's decline on Viti Levu and Vanua Levu.

(iv) Goats are free-ranging on many of the smaller islands in the Fiji Group, especially uninhabited ones. Goats are presently considered a profitable commodity and fetch high prices. On larger islands they are usually kept in some kind of enclosure, but costs of fencing are often beyond the means of outer island villages, including the one on Yadua Island.

The effects of goats on iguana populations is indirect, but in the long term can be as devastating as that of cats. Goats eat the understorey of a forest, thereby preventing new growth and regeneration. This is particularly marked in drought conditions when there is little grass available and when the population achieves a high density. Removal of ground cover renders juvenile and hatchling iguanas susceptible to predation by hawks and kingfishers. It also leads to increased soil erosion, especially after heavy rain.

Goat farming has several other detrimental effects on iguana habitat. Particularly damaging is the burning of scrub to create new grazing areas. Many such fires have burned out of control and destroyed significant sections of the remaining forest. Ample evidence is now available that goat farming has severely affected iguana populations. According to the Fijians, Devilau, a small island in the Yasawa Group very close to Matacawalevu, once supported a dense iguana population like Yaduataba. A recent search of the island failed to find a single specimen. Though Yaduataba contained well over 200 goats before the island was declared a wildlife reserve in 1980, goats had only

been introduced there about seven years previously and in relatively small numbers.

In conclusion, it can be seen that the decline of *Brachylophus* in Fiji cannot be ascribed to any single factor. On many islands, feral cats seem to have been the most important cause, while on others habitat destruction, through burning, deforestation and goat farming, has had a major impact. The introduction of mongooses on the two large islands has been yet another cause of decline. Virtually all inhabited islands support feral cats and have experienced varying degrees of alteration from the original forest habitat. Not surprisingly, therefore, *Brachylophus* only remains abundant on a few, small uninhabited islands that have escaped major disturbance. Yaduataba Island, only 120 m from Yadua at closest approach, provides a striking example of this phenomenon.

Ecology and conservation of the crested iguana

This species is confined to dry islands with a mean annual rainfall of approximately 180 cm. Most of this rain falls in the November–March 'hurricane season'. There is a pronounced dry season from May until September when drought conditions may occur. Air temperatures range from a minimum of about 16°C in July–August to a maximum of about 31°C in January–February. Neither of these extremes is encountered in the shaded forest canopy where the iguanas live.

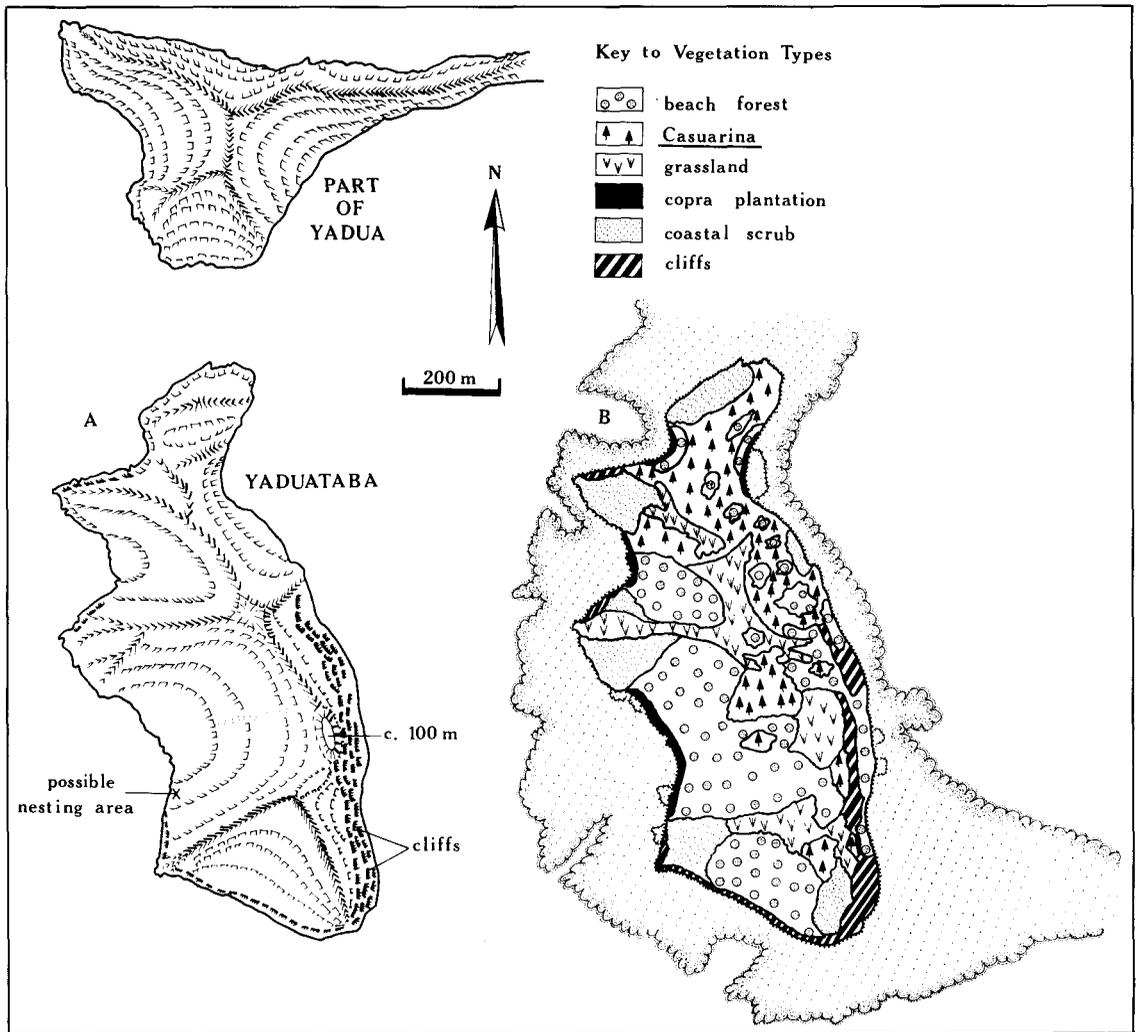
Yaduataba (Figure 2) is a small (0.7 sq km), volcanic island reaching 100 m in height. There are several different vegetation types including: (i) dry beach forest, a plant community typical of some Pacific islands (David Hassall, pers. comm.); (ii) dry, exposed or disturbed areas dominated by *Casuarina equisetifolia*; (iii) areas of scrub and small trees, usually on exposed slopes and windswept ridges with poor soil; (iv) grassland, mainly a result of burning and tree felling, and (v) small coastal copra plantations. Over 120 plant species have been collected from the island. Iguanas are almost exclusively confined to the beach forest habitat. The soil is sandy, reaching a depth of 50 cm in places. Boulders and large rock outcrops occur throughout the island. There is some evidence from aerial photographs taken in 1973, 1978 and

1980 that grassland areas have increased at the expense of beach forest due to burning.

The total iguana population of Yaduataba is difficult to estimate because the animals, especially hatchlings and juveniles, are very well camouflaged. However, adults would number between 100 and 200. Activity patterns vary according to age and sex. Hatchlings emerge during January and February. They have a mean snout vent (SV) length of 8.4 cm and a total length of about 28 cm. During the early months of life they appear to move around in small groups of 2–4, dashing for

cover when moving over open ground. At night they shelter in low bushes.

Growth is quite rapid and yearling iguanas may achieve a SV length of 12 cm and a total length of 41 cm. Like hatchlings, juveniles are difficult to find and hide the entire body behind a branch on the approach of a human observer. They can be found more readily at night using a spotlight, since they sleep motionless on branches, instead of hiding. Juveniles show little sexual dimorphism and the ground colour of the body is a uniform light green.



Further rapid growth continues so that sexual maturity is attained about 2½ years after hatching (at least in captive specimens at Orchid Island—see below). On Yaduataba, adult females, gravid with eggs, have SV lengths of 18.5–20.7 cm, with total lengths of 67–87 cm. Adult males are 19.0–22.3 SV length, with total lengths of 61–84 cm.

The iguanas on Yaduataba show a characteristic daily activity pattern. Much of the morning is spent thermoregulating. Shortly after sunrise, the iguana, which has spent the night in a tree, turns its body around to face broadside on to the rising sun. After reaching a preferred body temperature (of 32°C), the animal usually alters its orientation or seeks partial shade. This process may take from one to several hours depending on the weather conditions. In relatively cool conditions in August (air temperature 27–28°C), full basking lasted as late as 1100 hours. Table 2 summarises records of perching sites used by iguanas during 1979–81 field trips. An iguana may, or may not, subsequently feed in the tree used as a bask-

ing site. Quite often, the tree utilised for thermoregulation, e.g. *Cocos nucifera* or *Casuarina equisetifolia* is not a food tree. If this is the case, the animal climbs down to the trunk and walks across open ground to reach the food tree. Much licking of the ground takes place during this process. Alternatively, the animal may reach the food tree by traversing the forest canopy. Further basking/thermoregulation may occur prior to feeding. Intermittent head bobbing may occur during this period. Actual feeding takes place for one or two brief periods of five minutes or so, usually in early or mid-afternoon. Following feeding, the iguana may or may not remain in the same tree for the night. Nearly all activity ceases about half an hour before sunset.

Adult male *Brachylophus* become aggressive and territorial in September/October as the weather starts to warm up. At this time of year a number of different tree species near the main beaches (near copra plantation areas in Figure 2) are in bloom or begin to produce leaves, and the iguanas,

Table 2. Utilisation of perching sites by iguanas: Yaduataba all trips.

Species of tree and family	Fijian name	Coastal/forest	No. of iguanas
<i>Vavaea amicornum</i> (Meliaceae)	Cevua	C/F small tree	86
<i>Mallotus tilifolius</i> (Euphorbiaceae)	Yaqata	C small tree	30
<i>Diospyros</i> spp. (Ebenaceae)	Kau loa	C shrub small tree	21
<i>Hibiscus tiliaceus</i> (Malvaceae)	Vau	C small tree	15
<i>Premna taitenis</i> (Verbenaceae)	Yaro	C small tree	9
<i>Canthium odoratum</i> (Rubiaceae)	Noko ni savu	C small tree	8
<i>Derris trifoliata</i> (Papilionaceae)	Duva	C creeper	8
<i>Eugenia rariflora</i> (Myrtaceae)	Qaqi koro	C small tree	4
<i>Ficus obliqua</i> (Moraceae)	Baka	C/F large tree	4
<i>Ervatamia orientalis</i> (Apocynaceae)	Laqaiqai	C/F small tree	3
<i>Fagraea gracilipes</i> (Loganiaceae)	Buabua	C tree	3
<i>Cocos nucifera</i> (Palmae)	Niu	C tree	3
<i>Calophyllum inophyllum</i> (Clusiaceae)	Dilo	C tree	2
<i>Gyrocarpus americanus</i> (Hernandiaceae)	Wiri wiri	C large tree	2
<i>Terminalia littoralis</i> (Combretaceae)	Tavola	C large tree	2
<i>Pongamia pinnata</i> (Papilionaceae)	Karisini	C large tree	2
<i>Morinda citrifolia</i> (Rubiaceae)	Kura	C large tree	2
<i>Entada phasioloides</i> (Mimosaceae)	Wa lai	C/F creeper	2
<i>Thespesia populaea</i> (Malvaceae)	Mulomulo	C tree	1
<i>Messerschmidia argentea</i> (Boraginaceae)	Kau yalewa	C small tree	1
<i>Decaspermum fruticosum</i> (Myrtaceae)	Nuqanuqa	C shrub	1
<i>Casuarina equisetifolia</i> (Casuarinaceae)	Nokonoko	C tree	1
			Total 210
Others: Dead trees			3
Forest floor litter			4
Rocks on forest floor			7
Rocks on beach			4
			Grand total 228

especially adult males, but also females and juveniles, converge on this area. Buds, flowers and very young leaves of trees such as *Fagraea graclipes*, *Pongamia pinnata* and *Calophyllum inophyllum* are eaten.

During aggressive encounters between males, the combatants invariably change colour from green to dark grey or black. Each animal lowers the dewlap, erects the skin on the back and puffs up with air, so as to appear as large as possible. Territorial conflicts involve much head bobbing and circling of the opponent, as well as biting. Such encounters can last half an hour or more and considerable physical damage may be inflicted. Well over 25 per cent of adult males have missing toes or damaged tails, whereas no such injuries were observed in females or juveniles.

By January, definite and well-spaced territories have been established throughout the forested area. Usually, a male and female are found in each. By this time, the trees near the beach are no longer in flower and the majority of iguanas are found in *Vavaea amicorum*, the commonest tree in the forest, *Mallotus tilifolius*, *Dispyros* spp. and *Hibiscus tiliaceus*. These are all food trees, probably for most of year in the case of the evergreen *Vavaea* and *Hibiscus*. This situation continues until March, by which time most of the mating has occurred. In April the gravid females all leave the territorial areas to lay their eggs. Males remain dispersed, but are no longer so aggressive. The migration of the females is apparently to a communal nesting site. Nobody knows for sure where this is, but my field assistant, Maika Natera, found a number of gravid females in low bushes in a sandy area near the main beach. This may well be the nesting area. During April 1980, I sampled over 40 males scattered throughout the island, but only a single 'empty' female.

Not much is known of the behaviour of the iguanas from May until September but they are believed to be inactive in the cooler, dry weather. Adult males have occasionally been observed basking on boulders on the beach. During the heat of the day one specimen took shelter in a small cave formed by two large rocks. Another male used a crab burrow as a retreat.

The *B. vitiensis* recorded on Matacawalevu Island

in the Yasawas were all captured in ivi trees (Tahitian chestnut) *Inocarpus fagiferus*. The ivi is a large, broad leaved, leafy tree, and is an important food plant for *B. fasciatus* elsewhere. It is now clear that the apparent difference in ecology between the two iguana species is less than previously thought. The crested iguana is found on other trees on Yaduataba simply because the ivi is absent. There are some indications, however, that *B. vitiensis* is more strictly herbivorous than *B. fasciatus*, which tends to show a keen appetite for insect food.

Conservation action

Following an intensive campaign of seminars, photographic displays and general lobbying in the local media, Yaduataba was declared Fiji's first wildlife reserve in August 1980. Two government Ministers, representatives from the National Trust for Fiji, the owners of the island and local officials made up the party visiting Yaduataba. Permission to visit the island is now given through the National Trust.

Funds to set up the island as a wildlife reserve were provided by a WWF/IUCN grant. Under the terms of the agreement, ownership of the island remains in Fijian hands, all goats are to be removed from the island and no further burning or other forms of habitat destruction is to take place. During 1981 all but about 10 goats were rounded up and transported to the new enclosure on nearby Yadua Island.

Awareness of the crested iguana has been promoted in a number of ways. The Fiji Film Unit made a short documentary on the species including footage of both wild and captive animals. This was released to cinemas as a 'short' in early 1981. The animal also appeared on the front cover of the 1980 Fiji Telephone Directory. Captive animals have been held at Orchid Island Cultural Centre, Suva, since 1979, and two clutches of eggs have been hatched there, the first in late 1979/early 1980, and the second in early 1981. Several adults died due to the wet and humid conditions in Suva during 1980 but subsequently no further deaths have occurred and the 1979/1980 hatchlings are now sexually mature. The species is perhaps unique among vertebrates in having been recognised as a new species, given

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protected status and bred in captivity before being allocated a scientific name. Orchid Island Cultural Centre also has a large holding of banded iguanas. One of these has been housed there for nearly ten years. A large number of clutches of eggs have been successfully hatched under the auspices of Mrs Ivy Watkins, the wife of the manager.

Acknowledgments

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Addendum

In recent months it has become clear that a major reason for the persecution of *Brachylophus* iguanas is the presence in Fiji of the voracious gecko *Gehyra vorax*. Apparently Fijians do not always distinguish between the two. This may seem surprising, but many specimens of the gecko have a pattern of brown and greenish bands along the body similar to that of the banded iguana *B. fasciatus*. The voracious gecko is possibly the largest member of its family in the South Pacific. Poorly represented in museum collections, its distribution is believed to include New Guinea, the Solomon Islands and Fiji. Reaching a total length of 25 cm, and with a thick muscular body and very large toe-pads, it is much feared by the Fijians for two reasons. Firstly, it has a powerful bite and is reluctant to let go. Secondly, and even more important, the toe-pads adhere strongly to human skin, making it difficult for a panicking person to remove. The small sharp claws can also leave a nasty scratch. The presence of the voracious gecko may therefore account, in part, for the fearsome reputation of *Brachylophus* iguanas.

In many localities, however, the voracious gecko is well known in its own right and is called 'the lizard which barks like a dog' after its yapping call. Indeed, until about 30 years ago the gecko used to be a staple food item in some parts of Fiji, specimens being brought to the local market impaled on sticks and covered with turmeric.

John Gibbons

Iguanas of the South Pacific



Voracious gecko *Gehyra vorax* (John Gibbons).