

Flat-tailed Tortoise - *Pyxis planicauda* – Darrell Senneke and Chris Tabaka DVM

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Taxonomic "Journey":

*Testudo planicauda* GRANDIDIER 1867

*Acinixys planicauda* - SIEBENROCK 1902

*Testudo morondavaensis* VUILLEMIN 1972

*Pyxis planicauda* - BOUR 1981

*Pyxis planicauda* - KING & BURKE 1989

*Pyxis (Acinixys) planicauda* - KUCHLING 1989

*Pyxis (Pyxis) planicauda* - GLAW & VENCES 1994

Common name: Malagasy Flat-tailed Tortoise

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This care sheet is intended only to cover the general care of this species. Further research to best develop a plan to keep the animal in peak condition and for reproduction is necessary, particularly with this rare diminutive species.

Usually in these care sheets we attempt to give a light overview of the species and its general appeal in the introductory paragraphs. The situation in this case is unfortunately far more serious than the norm, and as such it is more important to offer the following quote. The following is from John Behler's letter to the CITES Animal Committee and Concerned Parties, 9 January 2002

" While in Antananarivo, and prior to our southern Madagascar travels, I'd heard (pers. com. J. Durbin) that the flat-tailed tortoise (*Pyxis planicauda*) collection had resumed in the Kirindy area. As previously reported at an Animal Committee meeting, the collection of this species has exceeded the CITES quotas. This was verified by USFWS. At the CBSG/CAMP meeting in Madagascar last May, the status of this species was evaluated and judged to be critically endangered. This tortoise is a dry deciduous forest species that is sympatric with the giant jumping rat. This vanishing species was fully evaluated through a PHVA and the results predicted an extinction time of <30 years. The forest habitat is disappearing at 4-5% per annum. Ignoring all other factors, that statistic in and of itself provides a snapshot of the bleak future these species face. Further collection of this species of flat-tailed tortoises must stop. Arguments that animal dealers in Madagascar will play a role in this species' conservation have no biological foundation. The CAMP evaluation by Malagasy and expatriate reviewers was clear on this subject."

**HABITAT:** Flat-tailed tortoises are found in an environment that has a **very** wide climatic range, as mentioned above, in deciduous forest. In nature they experience temperatures below 45 degrees F (7 degrees C ) and above 100 degrees F.(28 degrees C ). They are inactive while in the upper range of temperatures and in nature seek shelter in higher humidity locations at that time. The term "dry" deciduous is somewhat misleading as even dry forests have a somewhat higher humidity in the understory. As with most forest dwelling species their humidity

requirements are fairly high so we would suggest striving for a humidity level above 70% . This must be taken into consideration when arranging housing for them. The species is also inactive during the lower temperature ranges and thus one of the most seasonal of all chelonia.

### **HOUSING FLAT-TAILED TORTOISES INDOORS: -**

The most useful form of indoor accommodation for Flat-tailed Tortoises consists of a "turtle table". ( [How to Build an Indoor Land Turtle Table](#) by David T.

Kirkpatrick Ph.D) To all appearances this looks like a bookshelf unit flipped onto its back. A reasonable size for a single specimen is 2 feet by 3 feet, (60 cm by 90 cm). If keeping more than one together, the size of this habitat should be increased along with providing sightline breaks and



opportunities to blend into their surroundings for this easily stressed, shy species. For a pair of adult Flat-tailed tortoises the indoor habitat should be at least 4 feet by 2 feet, (120 cm by 60 cm). Into the bottom of this "turtle table" holes can be cut to allow for the sinking of food, water, and nesting containers flush with the surface for easier animal access.

*Pyxis planicauda* must be provided with a water dish. For those that will not freely utilize one, we strongly recommend frequent soaking until they learn to associate the dish with water. One way of doing this is to place them into the dish on a daily or bi-daily basis until they learn this. The water dish in the habitat should be large enough to allow the tortoise to soak in it if it wishes - it must also be shallow enough to protect it from drowning. Small photographic developing trays work well for this purpose. As a substrate, because this is a high humidity species, we recommend cypress mulch which may be frequently misted.

In one corner of the environment a hardware store reflector clip light lamp should be positioned to provide artificial basking facilities. This should be positioned to provide a basking spot of 90 - 100 degrees F (32 - 38 degrees C) in that section of the habitat. The habitat should also be equipped with a full spectrum fluorescent light to provide for UVB. A UVB source is necessary for Vitamin D3 synthesis (an essential component of calcium metabolism). A mercury vapor bulb may be used to fulfill both heat and UV requirements. If using a mercury vapor bulb it is advised that one use a fixture with a ceramic lamp holder, as these are very hot. Fixtures should also be affixed in such a manner that they cannot contact the possibly flammable substrate. There should be a hide box located in the corner away from the basking spot to allow the animal a cool, high humidity dim retreat. This is an extremely important component particularly for this species. One suggestion is to build the hide box in such a fashion so as to be able to affix a moistened sponge in the top of it to insure high humidity.

**DIET** - A high fiber, low protein, calcium rich diet will ensure good digestive tract function and smooth growth. Many species fed on cat or dog foods frequently die from renal failure or from

impacted bladder stones of solidified urates. There is no reason to presume that Flat-tailed tortoises would react otherwise. Avoid over-reliance upon 'supermarket' greens, which typically contain inadequate fiber levels and are too rich in sugar. A light water sprinkling of leafy greens and weeds prior to feeding will approximate the typical early morning foraging of Flat-tailed tortoises and supply needed moisture to the diet. A chopped mix of fruits, vegetables, mushrooms and some greens will provide a varied diet and make it difficult for the tortoises to only pick their preferred items out of the mix. Further in situ dietary research is needed with this species as well as captive nutritional management.

Diet should contain:

- Various, varying fruits and vegetables
- Leafy greens (dandelions, clover, endive, etc.)
- Mushrooms



Additional calcium supplementation is essential. Powdered calcium can be sprinkled on all foods. It is suggested that the caregiver provide calcium supplemented with vitamin D3 if the animal is being maintained indoors and calcium without D3 if it is outdoors. Provision of a cuttlefish bone, which can be gnawed if desired, is also recommended. Additional calcium for rapidly growing hatchlings (like the one at the left) and for possibly gravid females is very important.

This species does not hibernate but it may aestivate in very hot, dry periods as well as in particularly cold periods. Until one is experienced with the species and ready to reproduce this rare species, it is not suggested that anything but very minimal aestivation be attempted and even then only with very close supervision. Environmental modification for breeding purposes has proven to be an important part of continued reproduction with this species.

**MEDICAL:** Before purchasing a group of this species (keeping single animals of such a rare species for a pet is not responsible in the author's opinions), a number of things should be taken into consideration. First and foremost is the intended purpose for your new Flat-tailed tortoise. *Pyxis planicauda* are a species which are under very considerable wild pressure and purchasing animals of such a species bears additional responsibilities in terms of making all necessary adjustments/pairings to reproduce it. We all have a responsibility to be sure that we do not contribute to the loss of such a magnificent species but rather contribute to it's future.

Before purchasing an animal, closely examine the mouth, nares (nostrils), and eyes of your intended purchase. If the mouth is extremely pale, the tongue appears covered in a coating of plaque-like material, there are bubbles coming from its nares or mouth, or the tortoise's eyes/eyelids are swollen shut do NOT purchase it.

This species is very sensitive to exposure to exotic (to them) pathogens. It should be maintained in strict isolation from other species. Otherwise, though small and seemingly delicate, healthy specimens of this species are incredibly hearty. Considering their native range, they have to be!

Lastly, it should be noted that drug dosage and administration information available on the internet or in hobbyist books is often dated and possibly dangerous, please leave drug advice to trained professionals.

Turtle and tortoise care research is ongoing. As new information becomes available we share this on the World Chelonian Trust web site at [www.chelonia.org](http://www.chelonia.org). Serious keepers find it to be a benefit to have the support of others who keep these species. Care is discussed in our free online email community, which may be joined from the web address above. Please contact us about the many benefits of becoming a member of the World Chelonian Trust.

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References:

\*The EMBL Reptile Database <http://www.embl-heidelberg.de/~uetz/LivingReptiles.html>

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