

IDENTIFICATION GUIDE FOR SOUTH AFRICAN TORTOISES

Important characters

1. Shell: carapace dorsal and plastron ventral; the bony shell is covered by a layer of horny, plate-like scutes which have concentric growth rings; the central part of the scute is called the areola
2. Nuchal scute: most tortoises have a single nuchal but the leopard tortoise has no nuchal scute
3. Gular scute: most tortoises have a double gular but the angulate tortoise has a single gular scute
4. Buttock tubercles: presence or absence important for species identification
5. Front and hind feet have five and four claws, respectively, but two padlopers have four claws on all feet
6. Sex: males of some species have a plastral cavity; males of most species have a more bulbous supracaudal than females have; males of all species have a longer tail than females have



Carapace

Nuchal scute

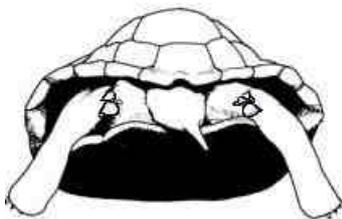
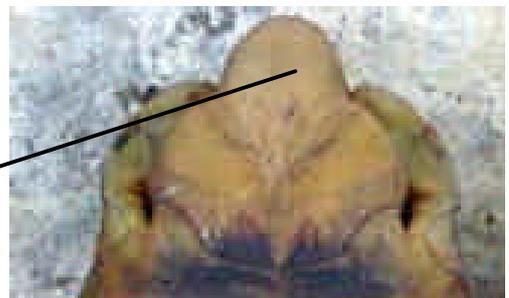
No nuchal scute



Plastron

Double gular scutes

Single gular scute



Buttock tubercles



Female: short tail



Male: long tail



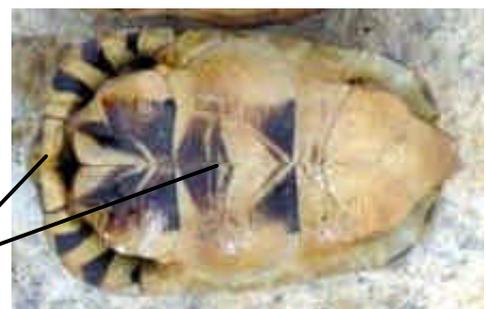
Chersina angulata

Male:

Plastral concavity
Supracaudal bulbous

Female:

Supracaudal flatter
Plastron flat

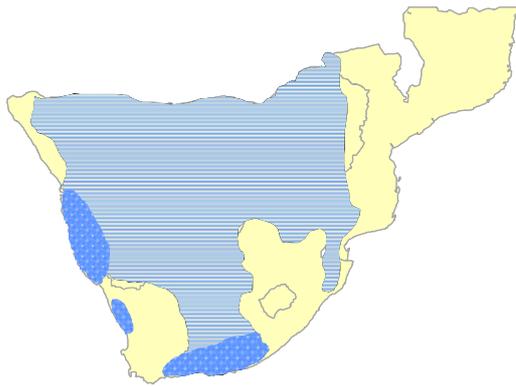


1. ***Stigmochelys pardalis*** (previously *Geochelone pardalis*) / leopard tortoise, mountain tortoise / bergskilpad. Largest tortoise in South Africa; nuchal absent; two subspecies are currently recognised but genetic analysis indicates that these subspecies may not be valid.

Stigmochelys pardalis pardalis

Southwestern Namibia and western and southern South Africa. Carapace flattened; sexes of similar size; male plastron concave; adults spotted or uniform colour; juveniles dull yellow with two or more irregular, blackish spots on carapace scutes (left)

-  *Stigmochelys pardalis pardalis*
-  *Stigmochelys pardalis babcocki*



Stigmochelys pardalis babcocki

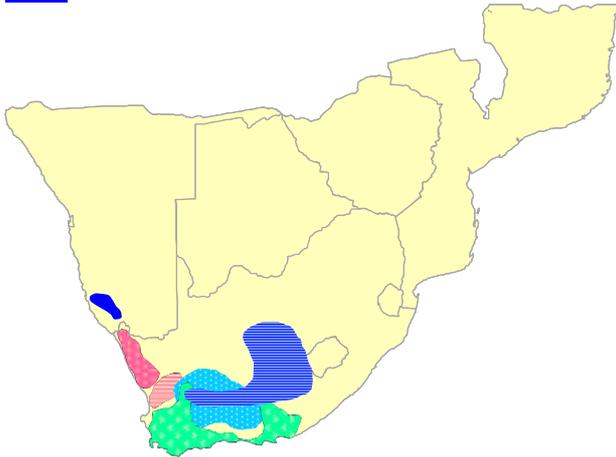
Central southern Africa and Eastern Africa. Carapace convex; male plastron slightly concave; males smaller than females; juveniles have a single central dark spot (often absent) on carapace scutes (right)

2. ***Chersina angulata*** / angulate tortoise / rooipensskilpad, duineskilpad, ploegskaarskilpad
Medium-sized; convex carapace; single gular long in males and shorter in females; great colour variation



Homopus species

-  *Homopus areolatus*
-  *Homopus femoralis*
-  *Homopus boulengeri*
-  *Homopus signatus signatus*
-  *Homopus signatus cafer*
-  *Homopus solus*



3. ***Homopus areolatus*** / parrot-beaked tortoise / gewone padloper / papegaai-bekskilpad
Shell dorso-ventrally flattened and carapacial scutes have large, sunken areolae; **four claws on front** and hind feet; buttock tubercles absent or very small; background colour of shell is often greenish; each scute has a thin dark edge; plastron is often dirty white or light brown; males lack a plastral concavity



4. ***Homopus femoralis*** / Karoo tortoise / groot padloper

Shell dorso-ventrally flattened; narrow contact between last two vertebral scutes of the carapace; **four claws on front** and hind feet; buttock tubercles are well-developed; carapace colour is dark-brown, light-brown or grey; scutes normally have dark edgings anteriorly but this colouring fades with age; plastron is light to dark brown, often with dark borders; males lack a plastral concavity



5. ***Homopus boulengeri*** / red padloper / Karoo klipskilpad, swaarweerskilpad

Shell dorso-ventrally flattened and carapacial scutes have large areolae; **five claws on front feet** and four claws on hind feet; buttock tubercles present or absent; carapace colour is reddish-brown, dark brown or grey; plastral colour is highly variable; males have a plastral concavity; favours a rocky habitat



Photo credit: Fanie Avenant



Photo credit: Fanie Avenant



6. *Homopus signatus* / speckled padloper / klipskilpad

Shell dorso-ventrally flattened; **five claws on front feet** and four claws on hind feet; buttock tubercles well developed; males have a plastral concavity; favours a rocky habitat

Homopus signatus signatus

Carapacial scutes are raised around edges with large, sunken areolae; posterior margin of shell serrated; carapace colour is ivory and covered with dark spots or rays; plastral colour is highly variable; restricted to north-western regions



Homopus signatus cafer

Carapacial scutes smooth with large areolae; posterior shell margin is not serrated; carapace colour is often brown or salmon pink and covered with small dark spots; plastral scutes darker in the centre and lighter around the edges; restricted to south-western regions



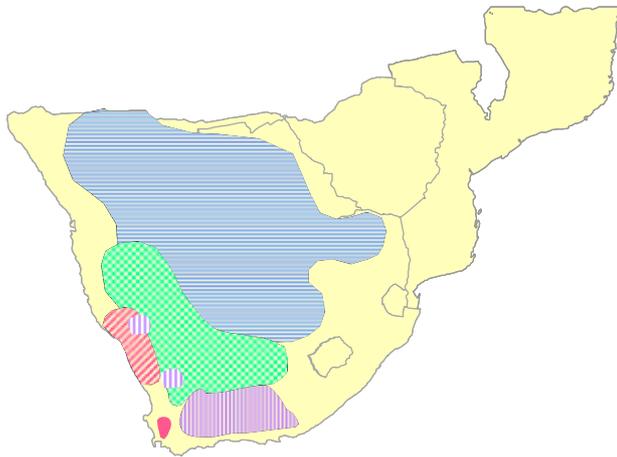
7. *Homopus solus* / Nama padloper

Shell dorso-ventrally flattened; **five claws on front feet** and four claws on hind feet; buttock tubercles absent; chestnut colour with dark edges on scutes; males have a plastral concavity; favours a rocky habitat; occurs only in Namibia



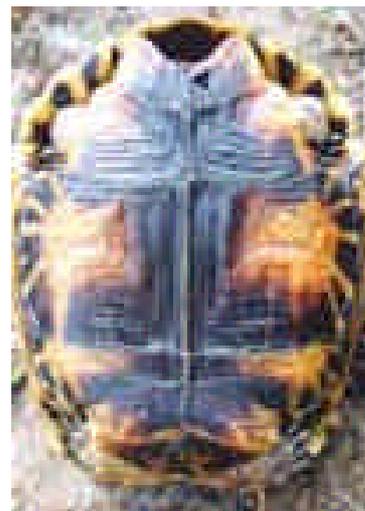
Psammobates species

-  *Psammobates geometricus*
-  *Psammobates oculifer*
-  *Psammobates tentorius tentorius*
-  *Psammobates tentorius trimeni*
-  *Psammobates tentorius verroxii*



8. *Psammobates geometricus* / geometric tortoise / suurpootjie

Domed shell; the carapace has a radiated pattern; carapacial scutes often raised (pyramidal); carapace has yellow rays on a black background; plastron is yellow or brownish with a dark central pattern, but the plastron occasionally has a rayed pattern; the absence of buttock tubercles helps distinguish geometric tortoises from tent tortoises; males have a plastral concavity; hatchlings occasionally have orange rays; distribution restricted to renosterveld vegetation in southwestern Cape; listed as Endangered



9. *Psammobates tentorius* / tent tortoise / tentskilpad, knoppiesdopskilpad

Domed shell; most often the carapace has a radiated pattern but colour may be more uniform; buttock tubercles are present; three subspecies are currently distinguished but genetic studies indicate large differences among some groups. The taxonomy of this species will change in the near future.

Psammobates tentorius tentorius

Karoo tent tortoise

Carapacial scutes often raised (pyramidal); carapace has yellow to orange rays on a black or dark background; plastron is yellow or light brown with a dark central pattern that has a distinct border; males have a plastral concavity; typical form occurs in the eastern and southern Cape.



Genetic studies have shown that *P. t. tentorius* occurs much further north than was previously thought. The juvenile on the right (from Klipwerf) belongs to this group. The female below, from southern Namibia, also belongs to *P. t. tentorius*. The central pattern of Namibian tortoises is not as well defined as in the tortoises from South Africa.



Psammobates tentorius trimeni

Namaqualand tent tortoise

Carapacial scutes are pyramidal; carapace has yellow rays, often with red to orange at the base of the rays; plastron is yellow or light brown with a dark central pattern, which is often interrupted by light coloured rays; males have a plastral concavity; this subspecies is closely related to *P. t. verroxii*.



Psammobates tentorius verroxii

Bushmanland tent tortoise

Carapacial scutes are often rounded rather than pyramidal; carapace can be rayed or uniformly coloured and the rays can be yellow, orange or brown; plastron is yellow or brown and the central pattern is diffuse with a poorly defined border; males lack a plastral concavity; typical form occurs in the northern Karoo. This subspecies is distinct from *P. t. tentorius* and closely related to *P. t. trimeni*.



Photo credit: Johan Marais



***P. t. verroxii* from Namibia** differs substantially from those in South Africa and may be a separate species. Males in this group have a plastral concavity.

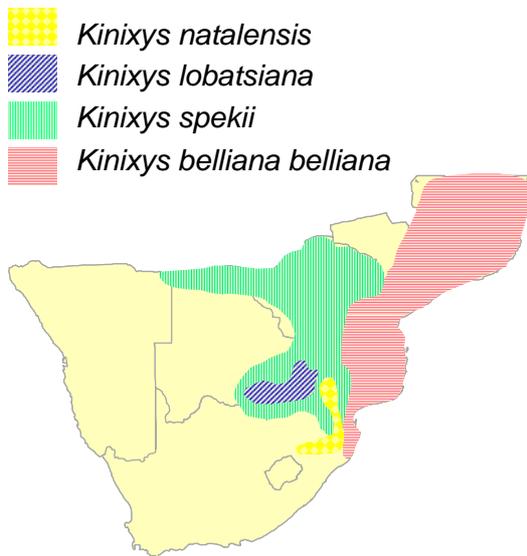


10. *Psammobates oculifer* / Kalahari tent tortoise / Kalahari tentskilpad, skulprandskilpad
 Domed shell; carapace has a radiated pattern with yellow to brown rays on a dark background; scutes are not pyramidal; plastron has a rayed pattern; posterior edge of the shell is distinctly serrated; buttock tubercles are present; males have a plastral concavity; wide distribution north of the Orange River



11. *Kinixys* species / Hinged tortoises

The carapace has a hinge that allows the tortoise to close its posterior shell opening.



Kinixys spekii / Speke's hinged tortoise
 Unicuspid beak; carapace colour often uniform; flat shell



Photo credit: Boycott & Bourquin

Kinixys belliana / Bell's hinged tortoise: Unicuspid beak and radial pattern on the carapace



Photo credit: Boycott & Bourquin

Photo credit: Vetter

Unicuspid beak



Kinixys lobatsiana
 Lobate hinged tortoise
 Unicuspid beak and strongly serrated posterior marginal scutes.



Photo credit: Boycott & Bourquin

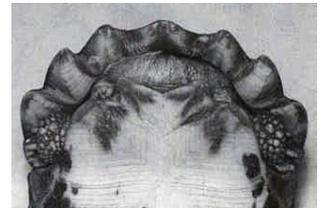
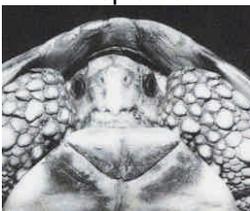


Photo credit: Boycott & Bourquin

Tricuspid beak



Kinixys natalensis
 Natal hinged tortoise
 Tricuspid beak; light centres on plastral scutes.



Photo credit: Boycott & Bourquin



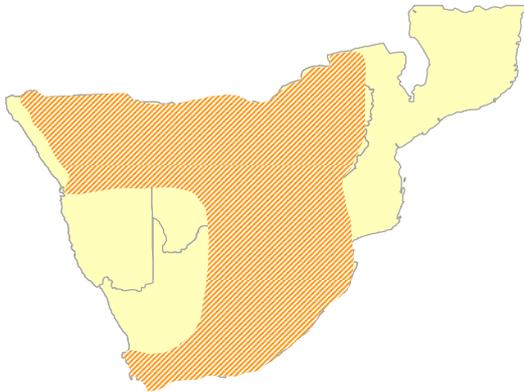
Photo credit: Vetter

Photo credit: Boycott & Bourquin

12. *Pelomedusa subrufa* (freshwater turtle, not a tortoise) / side-necked terrapin / waterskilpad

Lives in water but makes terrestrial excursions in the rainy season. The head and neck withdraw sideways into the shell. Found through most of South Africa but not in the western regions. Shell is flattened and the shape is oval to circular. Carapace and plastron are brown to black in colour

Pelomedusa subrufa



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- Branch, W.R. 1998. Field guide to the snakes and other Reptiles of southern Africa. Struik Publishers, Cape Town, South Africa.
- Vetter, H. 2002. Turtles of the World Vol. 1. Chimaira Buchhandels-gesellschaft mbH, Frankfurt am Main, Germany.