

Aldabra Atoll: A guide to potentially invasive alien species



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INTRODUCTION AND HOW TO USE THIS GUIDE

This document contains a list of invasive alien animal species that are

1. already present on part of Aldabra and have the potential to spread across the entire atoll; or
2. are present in the Seychelles and have the potential to reach Aldabra.

This document presents each species with a brief description (including habitat and nesting information for ants), their distribution in the Seychelles or the Indian Ocean, and the known and/or potential impacts on native flora and fauna. Additional information is noted if relevant. The vertebrates are listed first, followed by invertebrates. Potentially invasive alien plant species are covered in a separate guide (Harper & SIF 2018).

For rodents and ants, two groups of particularly invasive animals with likely significant impacts, additional information on identification is provided in Appendices 1 and 2, respectively. Surveillance procedures and incursion response instructions for rodents and ants are described in the Aldabra Atoll Biosecurity Plan.

This document is intended as an initial identification guide and is not exhaustive. **It should not replace the need to urgently seek expert advice to confirm the identity of any possible invasive species or how to deal with an incursion.**

This document can be cited as:

Harper, G.A. & SIF 2018. *Aldabra Atoll: A guide to potentially invasive alien species*. Seychelles Islands Foundation, Republic of Seychelles.

WHERE TO GET HELP

- For help with (and confirmation of) identification of any suspicious animal, SIF Head Office should be contacted in the first instance.
- Experts who could be contacted for further help with identification include:

Pat Matyot (ants and other insects)
Seychelles Broadcasting Corporation
Pat.Matyot@sbc.sc

Adrian Skerret (birds)
Mahé Shipping Ltd
askerrett@hotmail.com

Vincent Florens (snails)
University of Mauritius
vin.florens@uom.ac.mu

Grant Harper (rodents)
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- Detailed species information can be found in the book '*Invasive Alien Species in Seychelles: Why and how to eliminate them? Identification and management of priority species*' by Rocamora and Henriette (2015).
- Another local information resource is the [Western Indian Ocean Invasive Species Network](#) which is an information exchange network where requests for help and information can be posted.
- On a wider scale, the IUCN Invasive Species Specialist Group (ISSG) manages [Aliens-L](#), an email list dedicated to invasive species where users can seek and share information.

1. MAMMALS

1.1 BROWN/NORWAY RAT (*RATTUS NORVEGICUS*)

French/Creole names: rat brun/lera later



Description: Large rat. Adults ~ 250-350g weight. Small ears (cannot be folded forward to cover eye) and tail shorter than body length with usually pale feet (See [Appendix 1. Rodents: distinguishing features](#)).

Range: Present on Mahé, Praslin and La Digue and also Ste Anne, Ile aux Cerf and Longue islands.

Impacts: The brown rat is highly destructive and has been described as one of the worst invaders on earth. It preys upon a wide range of plants and invertebrates, and has been known to wipe out entire populations of small reptiles, land birds, seabirds and invertebrates.

Notes: Very strong swimmer; known to swim ashore from ships anchored up to 1-2km offshore. Note that the black rat *Rattus rattus* is already present on all main islands of Aldabra but the brown rat is likely to have additional impacts if introduced.

1.2 HOUSE/COMMON MOUSE (*MUS MUSCULUS*)

French/Creole names: souris domestique/souri



Description: Small rodent. Adults are ~20gm in weight. Can be difficult to distinguish from a juvenile black rat but see Appendix 1: Rodents of Seychelles: principal distinguishing features. Also, juvenile rats (~20g in size) are unlikely to be trapped as they are too small to be weaned, so should not be confused with a mouse.

Range: Present on Assumption, as well as D'Arros, Desroches, Desnoeufs and Marie-Louise. In the inner islands, mice are present on Mahé, Praslin, La Digue, Aride, Silhouette and Bird, with unconfirmed reports on Curieuse and Ste Anne.

Impacts: Mice consume a lot of plant material including seeds and seedlings but also eat insects and small lizards. They are also known to prey upon eggs and chicks of land birds and seabirds.

Notes: Present on Assumption so pose a very high risk when transiting to and from Aldabra. If mice become established on Picard they will most likely be first noted inside buildings, particularly where food is kept or prepared. Mice are very likely to arrive in stores as they can access (or create with gnawing) very small entrances to boxes or luggage, can reach very high population densities quickly when established and are difficult to control.

1.3 FERAL CAT (*FELIS CATUS*)

French/Creole names: chat haret/sat maron



Description: Unmistakable; a 2-5kg predator. Paw prints up to 3.2cm.

Range: Only currently found on Grande Terre, Aldabra. Once present on Picard but died out naturally. Found throughout the Seychelles, including on Assumption.

Impacts: Highly destructive predator of many species, including seabirds and juvenile tortoises/turtles. Neither rails nor seabirds co-occur with cats on Aldabra so it seems likely that they would wipe out these species if they establish on other islands of Aldabra.

Notes: On Aldabra, highly unlikely to cross main lagoon channels but have been seen swimming across shallow lagoon areas on multiple occasions and could reach Picard from Grand Terre relatively easily. If they are seen on other islands on Aldabra it should be considered an invasive species emergency and rapidly responded to as they have the potential to wipe out rails and seabirds on the other islands. Cats are a candidate for eradication from Aldabra in parallel with a planned rat eradication once methods are available to do this and biosecurity measures for Aldabra are sufficiently well-developed.

1.4 TENREC (*TENREC ECAUDATUS*)

French/Creole names: tangué/tang



Description: Large (up to 2kg) animal covered in spines. Unmistakeable.

Range: Across the inner islands only – Mahé, Thérèse, Praslin and Anonyme.

Impacts: Omnivorous; particularly destructive to invertebrates and probably also skinks, frogs and geckos.

1.5 FERAL RABBIT (*ORYCTOLOGUS CUNICULUS*)

French/Creole names: lapin sauvage/lapen maron



Description: 1-2.5kg as adult. Vegetarian. Could only be mistaken with the black-naped hare.

Range: In the inner islands, feral rabbits are found on Ile aux Récifs, Chauve-Souris (Praslin). In the outer islands they occur on Cosmoledo (Ile du Sud-Ouest), Descoueuufs and Marie-Louise.

Impacts: Highly destructive of low growing vegetation. Can reach very high population densities.

1.6 INDIAN MUSK SHREW (*SUNCUS MURINUS*)

French/Creole names: N/A



Description: Small mouse-like mammal (although it's an insectivore not a rodent) with long snout and very short tail.

Range: Not currently present in Seychelles but has invaded other islands in the Indian Ocean, such as Mauritius and the Maldives, so there is high potential for invasion.

Impacts: Very destructive to native invertebrates and some small lizard species.

Notes: The shrew would be a disastrous introduction to Aldabra because it would be fast to establish and almost impossible to eradicate (attempted eradications on much smaller and simpler islands have failed to eradicate shrews). They can also squeeze into tiny holes so can be transported very easily.

2. BIRDS

2.1 INDIAN MYNA (*ACRIDOTHERES TRISTIS*)

French/Creole names: martin triste/marten ordiner



Description: Medium-sized brown and black bird with bright yellow feet and bill. Strong and obvious calls.

Range: Present on most of the inner islands but eradicated from Denis, Frégate, Aride, Cousin and Cousine and attempted eradications from other islands. Not present on any outer islands.

Impacts: Generalist and opportunistic bird. Omnivorous. Preys on native birds, their eggs and nestlings, reptiles, and large invertebrates. Competes with cavity nesters such as kestrels and owls.

2.2 HOUSE SPARROW (*PASSER DOMESTICUS*)

French/Creole names: moineau domestique/mwano



Description: Small brown and grey bird. Male has black 'bib' under the beak (see photo). Forms large noisy flocks. Prefers buildings and gardens so would likely be found around the Research Station if it arrived on Aldabra.

Range: Present on many outer islands, particularly the Amirantes and Alphonse groups, where they probably arrived on ships from India, Tanzania or Mauritius. Not established on inner islands; only small numbers ever observed and eradicated from Mahé.

Impacts: Sparrows compete with native small birds, including the Seychelles fody. There is also a significant risk of them transmitting avian diseases to native birds.

2.4 FERAL CHICKEN (*GALLUS GALLUS DOMESTICUS*)

French/Creole names: poulet domestique/poul



Description: Readily recognised.

Range: Present on Assumption as well as many other inner and outer islands. Would have to be deliberately released as is a large, obvious bird.

Impacts: Damages native plant communities by eating seeds and seedlings. Competes for food with native ground-feeding birds such as rails and doves. Eats native lizards and invertebrates.

2.3 HOUSE CROW (*CORVUS SPLENDENS*)

French/Creole names: corbeau indien/korbo endyen



Description: Medium-sized black bird with a prominent beak, black head, throat, upper breast, wings and tail, and grey back of head, neck and belly. Very noisy with distinctive call. Social, often forming small flocks.

Range: Only occasionally present on Mahé and nearby islands in small numbers but often found on ships transiting through Seychelles waters, where they become accustomed to being fed by humans and are given left overs or are fed by crew members.

Impacts: Highly aggressive towards other birds. Omnivorous; can prey on eggs, chicks and birds, small lizards and invertebrates. Strong potential to transmit diseases to native birds and humans. Difficult to eradicate as highly intelligent and will quickly learn about control techniques. Could compete with the native pied crow on Aldabra. A problem species across the Indian Ocean including on Madagascar, Mauritius and Socotra.

2.5 MADAGASCAR FODY (*FOUDIA MADAGASCARIENSIS*)

French/Creole names: sren



Female fodies: Aldabra (left), Madagascar (right); Male fodies: Madagascar (left), Aldabra (right)

Description: Small sparrow-sized bird. Male is largely red or bright orange in breeding season and female is light brown to buff with darker brown striping year-round. They are difficult to distinguish from Seychelles and Aldabra fody, particularly when not in breeding plumage.

Range: Present on almost all inner islands and on the outer island groups of Amirantes and Farquhar. Previously present on Assumption and eradicated by SIF in 2015. A small population was also found to have self-established on Aldabra in 2012 which was also eradicated by SIF by 2015.

Impacts: Competition with, and potential for spreading pathogens to, the Seychelles fody and other small passerines (Assumption fodies were found to carry a number of unidentified pathogens). Known to hybridise with the Seychelles fody and Aldabra fody.

Notes: Madagascar fodies would again pose a threat to Aldabra if they were to return again to Assumption. If seen on Assumption, SIF management should be informed immediately.

3. REPTILES

3.1 PACIFIC HOUSE GECKO (*GEHYRA MUTILATA*)

French/Creole names: lezar disik



Description: Pale, nocturnal lizard that gathers around lights in buildings. Differs from the Asian house gecko in its smooth dorsal surface and the broad, flattened base of its tail. Relatively quiet call. Paired eggs attached to rough surfaces.

Range: On Aldabra (Picard only). Common across the inner islands and some outer islands (Denis, Coëtivy and the Farquhar group).

Impacts: Preys on moths, beetles and smaller geckos. May compete with native Aldabra gecko.

3.2 ASIAN HOUSE GECKO (*HEMIDACTYLUS FRENATUS*)

French/Creole names: lezar disik



Description: Nocturnal lizard that feeds around lights in buildings and sometimes in natural habitats. Rough dorsal surface, greyish or pink-brown with darker speckles. Call of very loud chirps.

Range: Of the inner islands, only on Mahé. Of the outer islands present on Bird Islands and the Amirantes.

Impacts: Preys on moths, beetles and smaller geckos. May compete with native Aldabra *Hemidactylus* gecko.

3.3 CRESTED TREE LIZARD (*CALOTES VERSICOLOR*)

French/Creole names: agame à gorge rouge/lezar lakret



Description: Similar to a small iguana. 40-60cm in length. Very long tail.

Range: Introduced to St Anne Island. Reported occasionally on Mahé but does not appear to have established. Invasive on other Indian Ocean islands such as the Chagos Archipelago.

Impacts: Omnivorous. Voracious predator of a variety of native wildlife from insects and lizards to small birds. Can transmit pathogens to other lizards.

3.4 SNAKES (ENDEMIC TO SEYCHELLES BUT NOT ALDABRA)

French/Creole names: serpent/koulev



Wolf snake (*Lycognathophis seychellensis*)

Seychelles house snake (*Lamprophis geometricus*)

Description: The Seychelles wolf snake has two colour forms – dark brown and golden brown. The Seychelles house snake is much thicker bodied and mid-brown with darker stripes. Both species less than 1m long.

Range: Both species endemic to the Seychelles and found on the larger inner islands but not Aldabra.

Impacts: Potentially a risk to native invertebrates, lizards and small birds on Aldabra however, being tropical forest dwellers it is unlikely they would reach Aldabra and become established there.

3.5 BROWN TREE SNAKE (*BOIGA IRREGULARIS*)

French/Creole names: N/A



Description: A medium-sized climbing snake with large eyes. Markings may be either vague or distinct blotches on a brownish-yellow background. About 38cm at hatching and may reach 3m long, but are usually 1-2m.

Range: Native to eastern Indonesia, New Guinea, Solomon Islands and the coastal areas of northern and eastern Australia. Invasive on Guam, the only known breeding population outside of its native range.

Impacts: Omnivorous and can consume large prey so potentially catastrophic to native invertebrates, lizards, bats, sea birds and land birds on Aldabra if they became established. Mildly venomous to humans. The brown tree snake is infamous for decimating Guam's wildlife, causing the local extinction of over half of the native bird and lizard species as well as two out of three native bat species. Several other bird and lizard species became critically endangered. By eliminating native pollinators the brown tree snake also impacted the ecosystem as native plant regeneration and coverage was reduced as a consequence.

Notes: Brown tree snakes are well known for easily stowing away in boats and planes. They are frequently reported from places across the Pacific and Indian Oceans, including Mauritius and Chagos.

4. INVERTEBRATES

4.1 ANTS

Several invasive and potentially highly destructive ant species occur in abundance on various inner and outer islands in the Seychelles. Ants can be highly invasive and damaging to whole ecosystems, and are extremely difficult to eradicate. They require particularly careful quarantine and surveillance. There are four species of particular concern for Aldabra: **the yellow crazy ant**, the **white footed house ant**, the **red imported fire ant** and the **African big-headed ant** (for additional identification information refer to Appendix 2. Invasive Ants in the Seychelles: principle distinguishing features).

4.1.1 Yellow crazy ant (*Anoplolepis gracilipes*)



Description: A 5mm long yellow-orange ant, with a darker brown abdomen. The YCA is one of the largest invasive ant species. It is thin with very long legs and antennae. It gets the name "crazy" ant by its very fast, frantic movements and apparent lack of trails followed when foraging. Workers all look the same. Active day and night. Sprays formic acid which can harm people and wildlife. Looks very similar to a species native to Aldabra, *Camponotus sp.*, from which YCA can be primarily distinguished by their much longer antennae.

Habitat and nesting: The yellow crazy ant is a ground or tree dwelling species that may also be found in walls, posts or other elevated habitats. The ant can live in buildings, grassland, or woodland. Nests may be found under leaf litter, piles of rubbish, in discarded coconut husks, in tree stumps, crab burrows and cracks in soil. The species spreads very rapidly and forms super colonies.

Range: Mahé, Praslin and La Digue as well as the smaller islands of Anonyme, Longue, Ste Anne, Bird, Denis, Cousin, Félicité, Marianne, Petite Soeur.

Impacts: Considered by the [IUCN Invasive Species Specialist Group](#) to be among the 100 worst invasive species in the world, the yellow crazy ant is widespread across the tropics. The species is most infamous for causing an "ecological meltdown" on Christmas Island where it killed more than a quarter of a million crabs, thousands of seabirds and changed the ecology of the island. Strong quarantine and biosecurity measures are essential to keep it from spreading to new localities. The species has already spread throughout Vallée de Mai (from first observation in 2009, to covering almost the entire site in 2016), had negative impacts on invertebrates and reptiles and requires continuous control at the site.

Notes: In Seychelles, the yellow crazy ant is particularly abundant on Mahé and Praslin so requires extra vigilance when checking any supplies or gear being sent to Aldabra. **This ant is one of, if not the highest concern species for potential introduction to Aldabra as its impacts are likely to be devastating and it will be impossible to eradicate if it establishes.**

4.1.2 White-footed house ant (*Technomyrmex albipes*)



Description: A 2-4mm long, dark brown to black ant. The pointed abdomen is distinctive. The lower half of their legs is contrastingly light compared to the rest of their body. They are active during the day. They form dense and compact trails when foraging.

Habitat and nesting: White-footed ants nest at or above ground level close to sources of food and moisture. The ant will sometimes make its nest in wall void and attics of houses, but nests are more typically found outside in trees, bushes, stem, trunk holes, rotting logs and occasionally in soil under stones.

Range: The range is not well defined but thought to be abundant across most of the Seychelles. It is definitely present on Mahé and Praslin and likely across the inner islands.

Impacts: It is unknown if this species is native or introduced in the Seychelles (although it is likely to be introduced) and its impacts are not well understood. In the USA, where it is invasive, it is highly destructive of seedlings and delicate plants. It is well-adapted to both human-assisted dispersal and natural dispersal.

Notes: White-footed ants were found in Aldabra supply materials in 2014 and controlled.

4.1.3 Red imported fire ant (*Solenopsis invicta*)



Description: A 2-6mm long, reddish-brown ant with a black abdomen. Worker ants can be a large range of sizes. They are active during the day. These ants are very aggressive and will bite and sting when disturbed.

Habitat and nesting: This is a ground dwelling species that nests in mounds of earth up to 46 cm diameter in open areas. Around buildings, they may nest under concrete foundations, paving, or slabs potentially causing them to sink or collapse. They have also been found nesting in electrical boxes. During periods of heavy rain, the ants may abandon their nests to seek higher ground, which may include movement into buildings.

Range: Despite being one of the most successful and pervasive invertebrate invaders, and being widespread across the Indian Ocean, to date there have been no confirmed reports of this species in Seychelles. It remains a significant threat given its prevalence and ease of introduction.

Impacts: Harmful to people. Stings are painful and can result in blisters after 24 hours or allergic reactions. Harmful to wildlife; can have adverse effects on invertebrates, small birds and lizards. Considered by the IUCN Invasive Species Specialist Group to be one of the world's worst 100 invasive species. The extensive damage caused to ecological and agricultural systems by this species is well documented.

4.1.4 African big-headed ant (*Pheidole megacephala*)



Description: A smallish sized ant (workers 2mm long, soldiers 3-4mm long). They are a light ginger-brown with a darker brown shiny abdomen. They are active day and night. The larger soldiers are much less common than workers with a disproportionately large head.

Habitat and nesting: These ants are usually active on the ground only. Nests may be found in rotten logs, under stones, beneath concrete or in the litter around trees and in the crevices of bark. While the ant typically nests outside, it has been known to nest in the wall cavities and ceilings. Their nests and foraging trails are characterized by small mounds or tubes of excavated soil. Big-headed ants respond strongly to bait or food resources and form long and busy foraging trails. This foraging behaviour may have assisted with their control on Cousine Island.

Range: On Mahé, Praslin, La Digue, Cousin and Cousine. Attempts to eradicate the species were made on Aride in 2017; a survey in 2019 is required to confirm the eradication successful. On Cousine, eradication attempts were unsuccessful but abundance has been controlled to very low levels.

Impacts: Big-headed ants are known to cause significant damage to native biological diversity, including vertebrates, invertebrates and also significant damage to agricultural systems. The species is considered to be one of the worst 100 invasive species in the world according to the IUCN Invasive Species Specialist Group.

4.2 SEYCHELLES SCALE INSECT (*ICERYA SEYCHELLARUM*)

French/Creole names: cochenille farineuse des Seychelles/lipou blan



Description: Coccid scale insect, a type of bug (Hemiptera). The body is 7-10mm long and covered with a layer of white and yellow powdery wax with a fringe of silken threads that gives it a woolly appearance.

Range: Present on Aldabra (Picard, Malabar and Grande Terre). On Mahé and many other inner islands.

Impacts: Coccids damage plants by sucking the host's sap and excreting honeydew, which is then colonised by sooty mould. Together these factors reduce photosynthesis, leading to leaf drop and stunted growth. On Aldabra coccids infest a wide variety of tree species including some mangroves.

Notes: This insect was first recorded on Aldabra in 1968. As it gradually increased in number, several reports warned about the threat that the scale insect posed to native plants and ecosystems. In 1989, the ladybird *Rodolia chermesina*, which preys on *Icerya seychellarum*, was released as a biological control agent and was believed to be having an impact on scale insect numbers. The scale insect was given the species name *seychellarum* because it was first found on a Seychelles endemic palm and therefore believed to be native. It was only later realised that it was really of Asian origin.

4.3 SPIRALLING WHITEFLY (*ALEURODICUS DISPERSES*)

French/Creole names: mouche blanche à spirale/bigay blan/mous blan



Description: Spiralling whitefly is not actually a fly but a small bug (Hemiptera) that feeds on the sap of plants. Females lay eggs in a spiralling pattern of waxy material.

Range: Widespread through the inner islands and present on some outer islands (Alphonse and Desroches).

Impacts: Damages plants through feeding on the host's sap and by the production of honeydew which results in the development of black sooty moulds. Together, these moulds inhibit photosynthesis and reduce plant growth and resilience. It can infest a variety of plants which helps it to spread very rapidly.

Notes: A major agricultural pest on Mahé. Eggs and larvae of this pest can be transported on leaves and on fruit and these early insect stages are often very cryptic.

4.4 GIANT AFRICAN SNAILS

French/Creole names: escargot géant d'Afrique/kourpa zean afriken



Left: pink-lipped (*A. immaculata*) average shell size 15cm, right: pale-lipped (*L. fulica*) average shell size 12cm.

Description: Unmistakeable very large land snails. Two species occur in Seychelles, the pink-lipped *Achatina immaculata* and pale-lipped *Lissachatina fulica*.

Range: Present on Mahé and most of the inner islands, as well as D'Arros and Desroches in the Amirantes.

Impacts: The giant African land snail is listed as one of the 100 worst invasive species in the world. Destructive of seedlings and delicate plants and poses a substantial risk to native plants.

Notes: A single small snail, identified as a juvenile giant African snail, was intercepted at the Research Station during a supply boat event in 2014. Eggs can be easily overlooked and carried in soil or construction materials. Can lay large numbers of eggs and species is hermaphroditic so only needs one individual or two overlooked eggs to establish a population.

4.5 TIGER MOSQUITO (*STEGOMYIA ALBOPICTA*)

French/Creole names: moustique tigre/moustik tig



Description: Unmistakable mosquito due to the black and white stripes on its body and legs.

Range: Present throughout most of the inner islands but absent from most outer islands, particularly in the Aldabra group (confirmed absent from Aldabra and Assumption in 2008).

Impacts: This mosquito can be a carrier for several diseases, including chikungunya, yellow fever, encephalitis and dengue fever. It is most likely to be transmitted in larval form in standing water.

4.6 HAIRY CATERPILLAR (*EUPROCTIS* SPECIES)

French/Creole names: senir plim



Pupa (cocoon)

Description: Creamy light brownish eggs are deposited under leaves and covered with hairs. Newly emerged larvae (the caterpillars) are found in clusters, appear brownish to yellowish and, when fully developed, the caterpillars are yellow and hairy with black spots. The pupa (cocoon) is oval-shaped, web-like and usually located in bark clefts, wall cracks and corners. The adult moth is white, hairy and mainly active in the evening.

Range: First reported in the Seychelles on Mahé in early 2015. Quickly became widespread throughout the inner islands. Small caterpillars can travel on the wind by 'ballooning' on strands of silk, so once established on an island can spread rapidly.

Impacts: People are affected by the hairs of the caterpillar. They cause an itchy skin rash and sometimes swelling and pain which lasts several days. It is treated with antihistamines and can require hospitalisation. The caterpillar is also likely to cause significant damage to native plants and reduce their health.

Notes: Highly likely to spread on ships in a dormant stage (eggs or pupae), on plant material or in crevices in wood. Requires careful checking of all at-risk items during quarantine. **High risk species for Aldabra.** Hairy caterpillars can reach plague proportions and have caused serious problems in the inner islands. The species *E. fraterna* has had outbreaks on the Maldives where they caused the complete defoliation of native trees.

APPENDIX 1. RODENTS: PRINCIPAL DISTINGUISHING FEATURES

The information below lists the features that are useful for identification of the brown rat and house mouse which are considered a high risk for Aldabra, and how to distinguish these species from the black rat which is already present on Aldabra. Species-specific information on distribution and impacts for the brown rat and house mouse can be found in the mammals section of this document.

| | House mouse <i>Mus musculus</i>  | Black rat <i>Rattus rattus</i>  | Brown rat <i>Rattus norvegicus</i>  |
|--|--|--|---|
| Adult weight | Up to 28g | Up to 215g (unlikely to trap a juvenile below 35g) | Up to 450g (unlikely to trap a juvenile below 35g) |
| Relative tail length | Slightly shorter or longer than the head & body length. Grey-brown all over. | Much longer than head & body length. Uniform colour all over. | Noticeably shorter than head & body length. Thick with a pale underside. |
| Colour of upper side of rear feet | Grey | Same colour all over, usually dark | Usually pale all over |
| Fur on back | Dull grey-brown | Brown or black | Brown |
| Fur on belly | Grey all over | Black, grey, white, or yellow-white. | White-tipped grey giving irregular colour |
| Droppings | 3.9 - 7.6mm length | 6.8 - 13.8mm length | 13.4 - 19.1mm length |
| Distribution | Found on Assumption , and many other islands throughout Seychelles. | Present on Aldabra & Assumption . Found on many islands throughout Seychelles. | Present on Mahé and most of the inner islands only. |
| Habits | Mainly lives on ground but can climb well. Nests in small holes. | Agile and frequent climber. Nests in trees, rarely nests on ground. Infrequent swimmer. | Burrows frequently. Can climb but not very capable. Strong swimmer. Nests underground. |

MOUSE VS. RAT

A mouse can be confused with a young rat, however:

- a mature mouse has larger ears and longer tail compared to its body length than a young rat, and
- a young rat has distinctly larger feet and head compared to the body than a mouse.

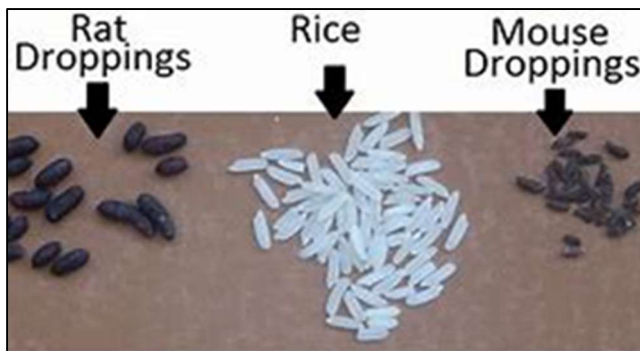


mature mouse

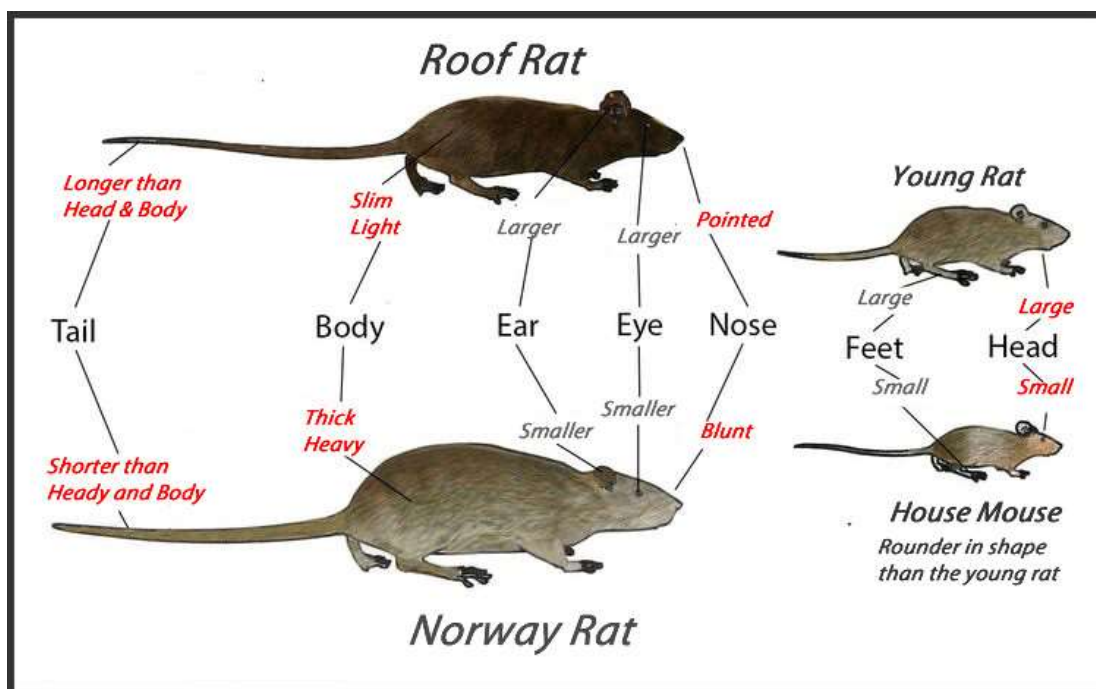


juvenile rat

- Mice have small, granular droppings compared to a black rat, e.g.:



- Features comparison (note: a black rat is also called a roof rat and a brown rat also called a Norway rat):



BLACK RAT VS. BROWN RAT

Black rats on Aldabra (note slim build, large ears and large eyes):



Brown rats (note heavier build and smaller ears compared to black rat):





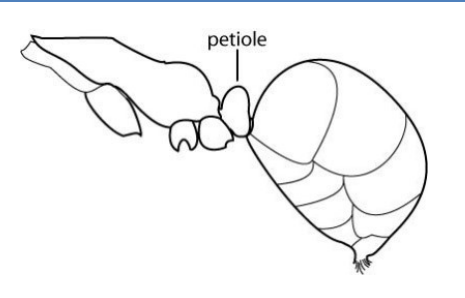

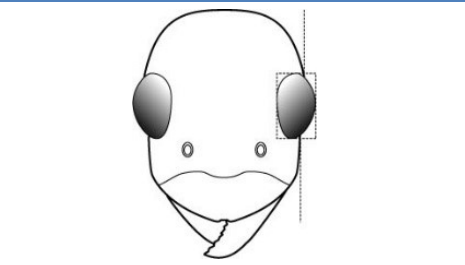

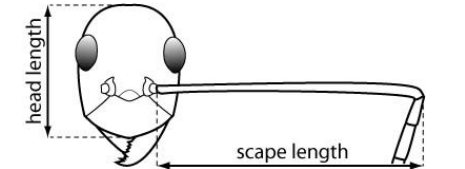

APPENDIX 2. INVASIVE ANTS: PRINCIPAL DISTINGUISHING FEATURES

The information below describes the features that are useful for identification of four invasive ant species that are not currently present on Aldabra (*African big-headed ant*, *yellow crazy ant*, *white-footed house ant*, and *red imported fire ant*) and which are considered a very high risk for Aldabra. Two further species are also included which are already present on Aldabra and could be mistaken for the high risk species (the introduced *black crazy ant* and the native *Camponotus sp.*).

A magnifying glass or stage microscope is useful for observing some of the key distinguishing features for ants. Identification of any suspicious or unidentifiable specimens should be confirmed by a specialist on Mahé. Further (very useful) identification resources can be found online at [Invasive Ant Key](#), [Pacific Invasive Ant Identification](#) and the [Pacific Invasive Ant Toolkit](#).

The four high risk species listed below are known to have devastating impacts in a range of ecosystems around the world and are easily moved about with people and supplies. All except the red imported fire ant are present in the Seychelles; the three that are present are common on Mahé as well as many other islands, including islands on the route of some supply vessels to Aldabra.

YELLOW CRAZY ANT (*ANOPOLEPIS GRACILIPES*)




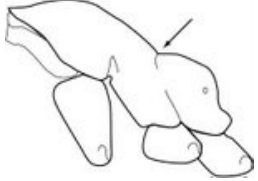
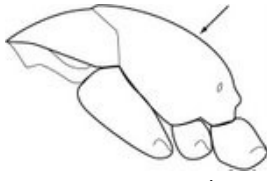
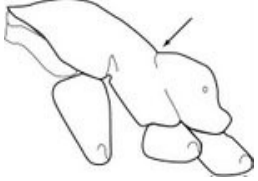



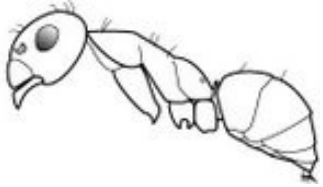


| | | |
|--|--|---|
| <ul style="list-style-type: none"> • Large size, ~5mm • Yellow to orange coloration • Slender body • Long appendages • Long neck connecting its body and head |  |  |
| <ul style="list-style-type: none"> • One waist segment (the petiole) |  |  |
| <ul style="list-style-type: none"> • Large eyes that break the outline of the face |  |  |
| <ul style="list-style-type: none"> • Antennal scape length ~2 times head length |  |  |

Similar species

On Aldabra there are two ant species that look similar to the yellow crazy ant and could possibly be mistaken for this species. One of these is an unknown species of the genus *Camponotus* (with no common name) and is believed to be native to Aldabra. It is a similar size and colour to the yellow crazy ant but can be primarily distinguished by its much shorter antennae.

Another similar species is the **black crazy ant (*Paratrechina longicornis*)** which is believed to be introduced to Aldabra and present only on Picard. It is similar to the yellow crazy ant in its extremely fast manner of moving and by its long antennae but can be distinguished by its much smaller size and dark colour.

The following chart illustrates the features that distinguish these three species.

| | <i>Yellow crazy ant</i> | <i>Camponotus sp.</i> | <i>Black crazy ant</i> |
|------------------------|---|---|---|
| Profile |  |  |  |
| Mesosoma |  impressed |  not impressed |  impressed |
| Antennal scapes |  ~2x head length |  < 1.5x head length |  ~ 1.5 x head length |
| Erect hairs |  few, thin, not produced in pairs |  many, thin, not produced in pairs |  many, thick, produced in pairs |
| Size | large (~5mm) | large (~5mm) | small (~2.5mm) |
| Colour | pale | pale | dark |

AFRICAN BIG-HEADED ANT (*PHEIDOLE MEGACEPHALA*)

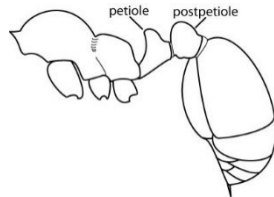
- Medium-sized (2-3.5mm)
- Yellow to brown in colour
- Covered in long, thin hairs
- Worker caste bimorphic (two different sizes)



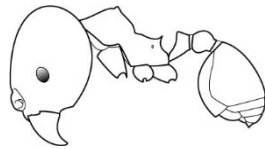
LARGE WORKER

SMALL WORKER

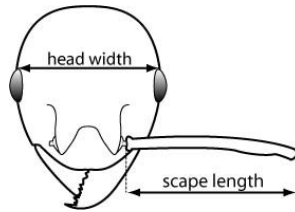
- Waist with two segments (petiole & postpetiole)





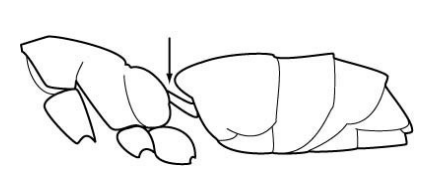

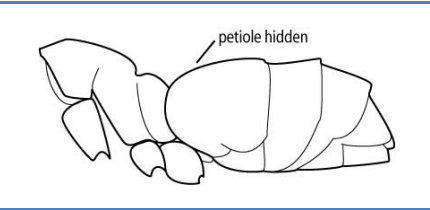

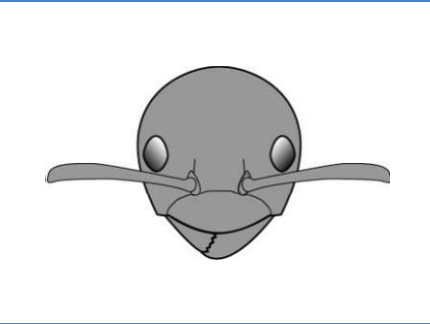

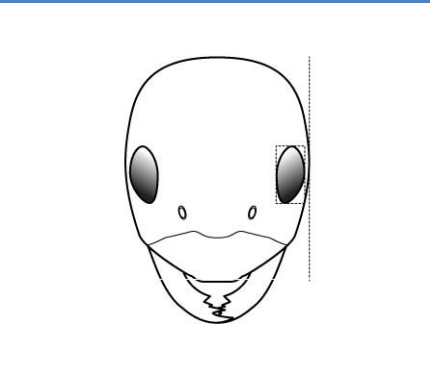

- Large workers have oversized heads



- Relatively short antennal scape



WHITE-FOOTED HOUSE ANT (*TECHNOMYRMEX ALBIPES*)

| | | |
|---|--|---|
| <ul style="list-style-type: none"> • Medium-sized (2-3mm) • Uniformly dark body • Contrasting pale lower legs • Surfaces dull and unshining |  |  |
| <ul style="list-style-type: none"> • Waist with one segment (petiole) • Petiole flat, not raised |  |  |
| <ul style="list-style-type: none"> • Petiole often hidden by final 4-5 segments of abdomen |  |  |
| <ul style="list-style-type: none"> • Colour of head uniformly dark (including mandibles & most of antennae length) |  |  |
| <ul style="list-style-type: none"> • Eyes, in full face view, do not break outline of head |  |  |

RED IMPORTED FIRE ANT (*SOLENOPSIS INVICTA*)

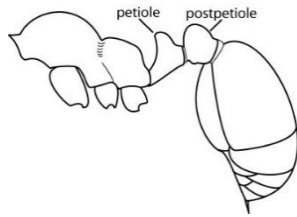
- Medium-sized (<2-6mm)
- Reddish in colour
- Covered in thin, erect hairs
- Abdomen armed with a stinger that gives painful stings and allergic reactions



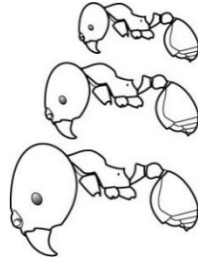
LARGE WORKER

SMALL WORKER

- Waist with two segments (petiole & postpetiole)



- Worker caste polymorphic (different sizes)



- Different head shape and sizes amongst worker caste

