

# Non-Government Schools Animal Ethics Committee - STANDARD OPERATING PROCEDURES

<b>SOP No:</b>	15	
<b>SOP</b>	Hermit Crabs	
<b>Scientific Name:</b>	<i>Coenobita variabilis</i>	
<b>Category:</b>	2 only	
<b>Approved activities:</b>	Activity	Category
	a. Observation of a particular behaviour of hermit crabs	2
	b. The appropriate care of classroom hermit crabs	2
<b>Approval Level:</b>	Where an activity is not listed in this SOP, approval must be sought from the Animal Ethics Committee and confirmed before it can be undertaken.	
<b>Authority:</b>	<b>Government Schools</b> – Department for Education and Childhood Development Animal Ethics Committee <b>Independent and Catholic Schools</b> – Non-Government Schools Animal Ethics Committee (NGSAEC)	
<b>Authority Approval Date:</b>	1 August 2010	
<b>Last update:</b>	3 July 2023	
<b>Disclaimer:</b>	<i>This document may be updated at any time. You should check the web site regularly to ensure that you are meeting the most recent recommendations. If you note any concerns with the information provided (inadequate, incorrect) please contact the relevant AEC.</i>	
<b>Licensing Requirement:</b>	Not applicable	
<b>Compliance Requirement:</b>	The keeping of this species requires approval from the School Principal. It is recommended that this Standard Operating Procedure be followed as a minimum in the provision of appropriate care and housing for this species.	

**General Information:** Hermit crabs are omnivorous crustaceans. They are best sourced through pet shops and the only species that should be sold are the Australian Land Hermit Crab. Most are marine creatures and require salt-water habitats however land hermit crabs are from further inland. Australia has two species of Land Hermit Crab. They are found in mangroves, sandy and rocky beaches. It is very difficult to breed hermit crabs so pet crabs sold in pet shops have been collected and removed from their wild habitat.

- Physical Attributes:**
- **Size (adult):** Crabs continue to grow and need larger shells to inhabit as they grow. They average 1- 6 cm.
  - **Weight (adult):** Varies with age and size.
  - **Life span:** Captivity up to 15 years. In nature up to 30 years
  - **Sexual maturity:** Adults.

**Behaviour:**

**Normal:** They are nocturnal and therefore more active at night; They can also be heard to chirp on occasion. This noise is thought to be caused by the crab rubbing its body parts together or rubbing against the inside of their shell.

**Socialisation:** Hermit crabs can live in colonies hence they are not recommended to live alone despite their name. It is recommended to only keep a few crabs in the tank at one time as they can fight if not given adequate space and resources.

**Activity levels (moulting etc.):** Hermit crabs love to climb and should be provided with driftwood and tree roots to climb on, but make sure they can't climb out of their enclosure. If conditions permit, they shed their exoskeleton (called ecdysis) and grow a new one. This moulting occurs every 2 –18 months depending on their age, size, and habitat. During this time they are very vulnerable and will bury themselves completely in the sand or other substrate provided in the tank. It takes up to 10 days for the new exoskeleton to harden and they often consume the old exoskeleton as a calcium source. As they grow, they need to replace their host shell. They require a shell that fits their whole body and allows for room to grow. They will not change shells if no suitable shell is available. They may fight with other hermit crabs to steal their shell if there are not enough appropriately sized shells provided in their environment. It is recommended to offer a variety of shells in the same size as the crab's current shell as well as some larger shells. A proper fitting shell allows the crab to retreat completely into the shell with the large claw acting as a door. Some crabs prefer loose fitting and some prefer tighter fitting shells. If a shell is too big a crab may not try it on and may even bury shells that they are not

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interested in. In some cases they will revert to an old shell from a new shell and may carry around an old shell while occupying a new shell for a short period of time. Hence do not remove old shells from the tank unless they are severely damaged. The shell opening is the most important factor influencing the shell choice of a crab (see Resources section for more information).

### Environment:

**Housing/Space:** You will need an aquarium 45cm x 30cm x 30cm at least depending upon the number of crabs you are housing. There should be a sand or gravel substrate base deep enough for your hermit crabs to bury themselves completely, and they may dig to help regulate their temperature in the tank or when moulting. A food bowl and two water bowls that they can crawl into and out of easily should also be provided. Sponges or rocks can be used in the bowls if they are too deep to allow them to climb out. Several hollow shells as described above, something to hide in and some pieces of cuttlefish and climbing objects are also recommended.

**Movement:** Crabs have a large left pincher claw for defence, balance and climbing. The right smaller claw is for moving food and water to their mouth. They can move quickly by extending their legs outside the host shell and scuttling along. They are escape artists and love to climb so ensure your tank is covered if offering climbing objects.

**Water:** Always keep water available. Two water dishes should be offered, one containing freshwater for drinking and one containing salt water for bathing. Use tap water that has been allowed to stand for 12 hours and tap water conditioners to remove chlorine and other contaminants before filling the tank. Do not use table salt as it contains iodine, which is harmful to crabs. Ask your local pet shop for advice on salt water concentrations.

**Temperature/Humidity:** A heat source, hygrometer (to measure humidity) and a thermostat should be provided for hermit crabs. You can use a special globe or a heat mat. If using a globe ensure the hermit crabs cannot touch or climb the globe by enclosing it with wire, to prevent thermal burns. If using a heat mat, place it on the side or the back of the tank rather than underneath and ensure that the heat gets through the substrate you have in the tank. Tanks should not be exposed to direct sunlight or air-conditioning draughts. Where heat waves occur and cooling is difficult to maintain, spray the inside of the tank with water or use wet sponges to keep up the appropriate humidity in the tank. Hermit crabs die if the temperature is too cold or too hot or the humidity is too low or high. Maintain a temperature between 20-30°C and humidity between 75-90% within the tank. The substrate in the tank should be always kept moist to aid with tank humidity. If turning a heat source on and off, it should be on if the day temperature is below 25°C or the night temperature is below 20°C. The heat source can be turned off if the day temperature exceeds 30°C. Alternatively, if you are leaving a heat source on all the time, it is important to provide an area in the tank that remains at room temperature. This is so the crabs can move back and forth from the heat source as they please.

**Filtration:** Not necessary

**Lighting:** Hermit crabs do not need additional lighting, only a heat source as listed above.

**Covering:** To assist with heating, cooling, and humidity, to protect from unsupervised interaction with children and prevent hermit crabs from climbing out, the tank should be covered. This also protects the crabs from anything sprayed in the rooms such as room deodoriser and insect sprays that may contaminate the crabs' tank, particularly their water sources.

**Shelter:** The aquarium should provide an area for refuge from lights, noise, and other crabs. This can be created with plants, pieces of wood and rocky overhangs. It is not uncommon for crabs to congregate in piles in the corner of a tank or hiding place.

**Cleaning:** Tank spot cleaning should be done weekly with food waste removed daily. The tank substrate should be changed monthly. The crabs should be removed first and placed into a secure container for full tank cleaning. Then remove all the equipment and once the substrate is removed, rinse the tank carefully. Rinse the tank substrate thoroughly if reusing it. Once the tank is dry fill it again with clean substrate (e.g. sand or gravel), clean bowls

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and replace clean housing items. Wooden logs and other climbing implements can be changed or cleaned monthly. Do not use chemicals.

### Feeding:

**Diet:** In the wild they eat vegetable matter and carrion. A hermit crab pellet or similar alternative should form the staple primary food source. They tend to eat at night, slowly and very little.

**Daily requirements:** Hermit crab pellets or flakes should be offered daily in an open flat bowl from which crabs can climb in and out of.

**Supplementary feeding:** Other food varieties (e.g. fruit, vegetables, dead insects) can be provided as a treat two to three times a week. Not all food types are suitable so check with your local pet store prior to feeding.

**Equipment:** Food and water bowls should be cleaned daily.

### Breeding:

- **Gestation period:** Lay eggs shortly after fertilisation but can hold the sperm for several months.

- **Number of offspring:** Larvae hatch in the shallows and develop into small crabs before looking for a shell to inhabit and move onto land.

**Mating:** The male deposits sperm into the female's gonopores on the first segment of the females back pair of walking legs.

**Pregnancy:** Land Hermit Crabs have very rarely been bred in captivity, as eggs need to hatch in the sea and they are very sensitive to environmental conditions.

### Handling:

**Humans:** Hermit crabs should only be handled by adults with handling kept to a minimum. Children should only observe, not handle hermit crabs nor knock on the tanks. Wash hands (no soap) thoroughly before handling the crab. Pick them up by the back of the shell and place them on an open flat palm. NEVER try to remove a crab from its shell. Handling should not occur when crabs are moulting or when changing their shells.

**Equipment:** Where crab movement is being observed by children out of the tank they must be placed on clean tray or plastic sheet not on the floor or carpet.

**Transport:** Hermit crabs should be transported in their tank or a container that has been lightly sprayed with water to maintain humidity. Transport quickly and do not leave unattended or allow the hermit crab or its enclosure to get too hot.

### Hygiene:

Wash hands (no soap) thoroughly before handling any crabs. After handling or working with crabs, thoroughly wash hands with soap and running water for at least 15 seconds. Dry hands with clean paper towel or an air dryer. Turn off the tap with the paper towel if possible.

### Signs of illness:

#### Indicators:

- loss of appetite;
- failure to thrive;
- lethargy;
- loss of limbs including claws;
- moulting issues including not remaining naked without a shell for a long period (e.g. more than 14 days); and
- parasites.

Keeping the tank clean and following advice relating to temperature and humidity particularly, aims to ensure problems are kept to a minimum.

### Treatments:

Schools are encouraged to develop a relationship with a Veterinarian or animal industry representative (e.g. pet shop staff) familiar with hermit crabs. This allows for confirmation of conditions and treatment options and to ensure the animal's welfare is maintained whilst in the care of the school. Many aquarium treatments are not suitable for hermit crabs and may cause further distress or death.

### Euthanasia:

When an illness or injury is such that recovery is unlikely then the hermit crab must be euthanised. Schools should contact their local Veterinarian to discuss emergency treatment options prior to an event occurring when keeping hermit

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crabs. Any adverse event including death must be reported to the AEC using the ADVERSE EVENTS form. Forms must be returned to the AEC within 7 days of the event occurring.

<b>Disposal/fate planning:</b>	When no longer required, hermit crabs must be rehomed. They must <b>NEVER</b> be released into the environment or waterways. Bodies must be disposed of correctly in accordance with local council regulations.
<b>Holiday and weekend care:</b>	Hermit crabs can be sent home for weekend or holiday care with students providing consent is received from the school Principal and the parents. Staff should provide carers with animal care and record-keeping instructions, emergency contacts and provide appropriate equipment and food. Animals must be checked daily, records kept and any problems reported to the school immediately whether kept onsite or taken offsite.
<b>Approved activities:</b>	<b>Where an activity is not listed in this SOP, approval must be sought from the Animal Ethics Committee and confirmed before it can be undertaken.</b>
<b>Activity:</b>	<b>a. THE OBSERVATION OF A PARTICULAR BEHAVIOUR OF HERMIT CRABS</b>
<b>Category:</b>	Category 2
<b>Objective:</b>	To instruct students on observing a particular behaviour of hermit crabs  Hermit crabs should not be removed from their tanks where possible. Behaviours should only be observed within the tank (e.g. feeding, shell changes).
<b>Activity:</b>	<b>b. THE APPROPRIATE CARE OF CLASSROOM PET HERMIT CRABS</b>
<b>Category:</b>	Category 2
<b>Objective:</b>	To instruct students on the appropriate care of hermit crabs as pets  Hermit crabs should not be removed from their tanks where possible. Students should become familiar with appropriate husbandry practices, care, and welfare concerns. This includes information with regards to shell changes.
<b>Resources:</b>	<b>Hermit Crabs – Department of Biodiversity, Conservation and Attractions</b> <a href="http://www.dpaw.wa.gov.au/management/marine/marine-parks-wa/fun-facts/421-hermit-crabs">www.dpaw.wa.gov.au/management/marine/marine-parks-wa/fun-facts/421-hermit-crabs</a>  <b>Pet Hermit Crabs Care Sheet</b> <a href="http://pethermitcrabs.org/care-sheet/">http://pethermitcrabs.org/care-sheet/</a>  <b>Hermit crab shell change video</b> <a href="https://www.youtube.com/watch?v=0jZe_VGLRYI">https://www.youtube.com/watch?v=0jZe_VGLRYI</a>  <b>Hermit crab shell selection information</b> <a href="http://www.hermitcrabpatch.com/Hermit-Crab-Shell-Selection-a/149.htm">www.hermitcrabpatch.com/Hermit-Crab-Shell-Selection-a/149.htm</a>