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Setting up Your Southern Knight's Aquarium

Never before has the keeping of seahorses in home aquaria been so easy! Southern Knights are easy to keep in an aquarium but like any pet they need to be fed and their environment maintained. You should look into what is required before purchasing your seahorses.

Keep in mind that you can make your Southern Knights aquarium as simple or as elaborate as you desire. There are literally thousands of accessories on the market, and it can be daunting at first. Below is a guide for setting up your aquarium. If you have any questions, feel free to contact us here at the farm.

Choosing a tank

There are many different sizes and styles of aquaria to choose from. An uncrowded aquarium will help you to observe the fascinating habits of your seahorses.

The minimum size should be 40 L, which will safely house four Southern Knight Seahorses up to about 14cm in length. Larger fish should be given a minimum of 50-L per pair. However, a larger tank (e.g. 150 L) will allow you flexibility in interior design, while giving the seahorses room to explore their new habitat. Deeper tanks are desirable if you intend to breed your seahorses. (see Breeding).

The larger your tank, the easier it is to maintain optimum water quality.

Substrate and Filter

There is a vast array of filter systems available on the market. Internal Powerhead filters are great, though choose a size appropriate for your particular tank. Ideally, you want the whole volume of your aquarium to pass through the filter 2-3 times each hour. Eg, for a 90-L tank, choose a Powerhead that filters 180-270 Litres per hour.

Undergravel filters are commonly used in aquaria where they act as both a mechanical and biological filter. Other forms of filter are also popular. A simple undergravel filter consists of a base-plate on which 3cm of coarse washed pebbles are placed. Please avoid very small stones, sand or shell grit as there is some risk that these may be ingested by the seahorses while foraging for food. Scattering larger stones on top of your pebbles makes a great looking tank (refer to Products for substrate available from Seahorse Australia).

For the best system for your needs consult your local dealer or contact us at the farm.

Air supply

When setting up air-stones, be aware that excess air can be dangerous, as the male seahorses can get air trapped in his pouch. Seahorses love to sit in the stream of bubbles coming from airstones. Occasionally, a male may get some air trapped in his

pouch (this can also occur during courtship with a female). This can be easily remedied by a gentle massage:

1. wash hands thoroughly and ensure there is no soap or moisturiser residue
2. Hold your male in both hands, just under the water surface, with his pouch-opening facing upwards.
3. Starting at the base of the pouch, very gently squeeze from the bottom up, encouraging him to open his pouch and release the air. It may take 3 or 4 attempts. Be patient, he will thank you for it. If you are nervous about doing this the first time, ring Rachelle at the farm for further guidance.

Holdfasts

Some artificial branches or other structures should be added that provide sites for the seahorses to wrap their tails around. Rope and netting are fine or choose artificial ornaments from your aquarium shop that have suitable structures for the seahorses to wrap their tails around. Avoid items with sharp edges. Live corals require temperatures outside the range of Southern Knights, and therefore are not compatible inclusions. Take care if adding live rock to your tank as it can be a source of harmful disease. See "Tank Companions" for other great temperate marine animals that complement Southern Knights.

Biological filtration & the nitrogen cycle - Looking after your water quality

Biological Filters are a normal part of keeping any aquarium. Your biological filter (which are your pebbles/substrate in an undergravel filter, or your sponge and noodles in a suspended Powerhead filter) is designed to grow 'helpful' bacteria, which convert toxic products (excreted from fish) into non-toxic forms.

Seahorses excrete ammonia, which is toxic if it accumulates. One species of bacteria in your biological filter will eat the ammonia, and convert it into nitrite.

Nitrite is also very toxic, however another species of bacteria will convert this to nitrate.

Nitrate is much less toxic to marine fish, and can be removed with the help of a simple protein skimmer, and by renewing some of the water. (Nitrate is an excellent nutrient for plants, so high levels will encourage algal growth).

While providing adequate food for your seahorses is necessary for their health, overfeeding (where leftover food is discarded on the aquarium floor) is dangerous for 2 reasons:

1. It encourages the growth of 'unsafe' bacteria
2. Levels of ammonia, nitrite and nitrate may rise suddenly to dangerous levels ("spike").

As with all aquarium fish, overfeeding should be avoided at all times, and any uneaten food removed (E.G. with a siphon) to avoid poor water quality.

Levels of Ammonia, nitrite and nitrate can be easily tested with test kits, available from pet-shops

Ideal levels are:

Total Ammonia at Zero mg/L

Nitrite at Zero mg/L

Nitrate at or below 100 mg/L

So – how does your biological filter become established?

Any type of fish will excrete ammonia, and this is what is needed to begin growing the bacteria in your biological filter. However in a new tank, the ammonia will rise to

dangerous levels before there are enough bacteria to break it down. Therefore it is highly recommended establish your biological filter prior to stocking with seahorses. There are several ways to do this – the two most popular ways are:

1. To use bottled culture media (from your petshop).
2. To set up your tank and put in one dead prawn. As the bacteria break it down, they will produce ammonia and kick-off the biological cycle. The cycle can take 6 weeks to complete. You will know it is complete because your ammonia and nitrite test will show readings of "zero". This means the bacteria are living in balanced numbers.

You can now consider your tank to have 'cycled' and confidently add your seahorses.

Water quality

When you first set up your Southern Knights aquarium, you would be wise to check the following parameters regularly:

Temperature, pH, salinity, ammonia, nitrite and nitrate. When the readings are staying relatively stable, you can stop checking so often and sit back and enjoy your extraordinary new pets.

Salinity

1. Southern Knights tolerate a range of salinity from a minimum of 18 parts per thousand (ppt) to a maximum of 36ppt. About 32 ppt is ideal. In specific gravity terms, between 1.01 and 1.02. They will live in artificial seawater and commercial brands are available (An excellent brand is Ocean Nature, available from our Seahorse Shop).

DO NOT use a mixture of table salt and freshwater, as this will kill your seahorses!

Preparation of artificial seawater

This requires care and we advise that the tap/fresh water be prepared first.

The following procedure is recommended:

1. Place fresh water in storage bucket for 2 hours with aeration. Have enough water for a 50% water change.
2. Check and de-chlorinate carefully by adding Extra Power water purifier (or similar).
3. Add aquarium salt as per directions on the pack.

As time goes by, and particularly so in warm weather, the salinity will gradually increase. Monitor and add fresh water (with purifier) to reduce the salinity level. Party ice is ideal to lower the temperature and salinity.

Measuring salinity is done with an inexpensive hydrometer, which is readily available from your aquarium dealer and from our Seahorse Shop.

Temperature

Southern Knights are temperate marine fish most content between 16-21°C (60-70°F). They can tolerate higher temperatures for short periods but this should be avoided, and anything above 24°C (75F) is very stressful for them. A rapid increase in temperature is also highly stressful so remember this when performing water changes.

If your seahorses ever appear stressed for any reason, lowering the temperature with party ice or freezer blocks to 16-18°C (68°F) is the best immediate attention you can provide.

Ideas to keep your water temperature down in warm climates:

- * Keep in an air-conditioned or cool part of the house.
- * A generous tank size (eg >80-L).
- * 2 freezer blocks. Keep one in the tank and one in the freezer and alternate as required.
- * Add party-ice. These simply replace evaporation and do not severely alter salinity.
- * Insulate unseen sides of tanks. (e.g. add polystyrene to sides of tanks hidden in cabinets).

Food

Having to find a source of live food is a thing of the past, thanks to Southern Knights being trained to eat previously frozen food. They love frozen Mysid shrimp, small krill and brine shrimp. They require feeding twice per day with approximately 50 shrimp/krill. In warmer weather (water temperatures) feed a little extra. A sole diet of frozen brine shrimp is not recommended for long-term, as it lacks important nutrients and your seahorses may slowly lose condition. It is best to supplement their diet with frozen Mysid shrimp or krill, as these have fantastic nutritional profiles. As with all aquarium fish, any uneaten food should be siphoned away. When doing this be careful not to injure your seahorse with the suction of the siphon. If live diets are available from your aquarium dealer, then these can be purchased occasionally to give your seahorse a treat. They will especially love the thrill of chasing their prey.

Disease Management

The key to good health is water quality and nutrition!

Our Southern Knights are regularly checked at the farm for any disease problems. Our staff ensures the good health of every fish leaving the farm. We do not recommend the indiscriminate use of antibiotics since resistant strains of bacteria may quickly result. If you suspect your seahorse might be unwell at any time, the best immediate attention you can provide is to lower the temperature to 16-18°C (65-68°F). Carol Keen has an online list of disease control products and suggestions, [click here](#).

More information

If you would like to join an enthusiastic on-line discussion group we recommend Ultimate Seahorse – please see our website for further information.