

Application for an approved Wild life trade operation

The following is an application by PQ AQUATICS to continue business as an approved Wild life trade operation in accordance with s.303FN. **.Accordingly we are applying again for another 3 year period.**

Specifically my operations includes collecting –under permits issued by relevant state Authorities (see copies included) one Phycodurus eques from south Australian water and limited numbers (up to 4 per year) of Phyllopteryx taeniolatus (weedy seadragons), Hippocampus breviceps (short headed Seahorse) and Hippocampus abdominalis.

Off spring are then raised for export to over seas public aquariums and educational institutions.

No off spring are knowingly exported for the purpose of food or for souvenirs.

All conditions have been applied with and annual reports have been made to the Commonwealth Department of the Environment, Water, Heritage and the Arts.

Pang Quong 16/10/09

PLEASE NOTE:

(A) The following information is similar to two previous applications and has only been slightly modified, and

(B) The term Seahorses refers to *Hippocampus abdominalis* (Pot bellied Seahorse) and *Hippocampus breviceps* (Short-head Seahorse). While the term Dragon(s) is referring to both *Phycodurus eques* (Leafy Seadragon) and *Phyllopteryx taeniolatus* (Weedy Seadragon)

Current Operating permits

Authority to export No WT2009-3149

CITES 2009-AU-560774

Section 59 exemption to obtain one egg bearing male LSD (SA)

Victorian Commercial Fishery General permit CP663

Protected Aquatic Biota Permit PA005 (Victorian)

Aquaculture License private land AP18

2. Who will conduct the harvest and Species concerned?

2.1 It is proposed that I Pang Quong (PQAQUATICS) will conduct any harvest of Seahorses and Dragons but only as outlined in permits from South Australia or Victoria (see relevant permits). These are granted annually after due process by the relevant state Authorities.

In the case of SA one berried Leafy Sea dragon (*Phycodurus eques*) and in Victoria up to 4 Weedy Sea Dragons (*Phyllopteryx taeniolatus*)

In addition 4 of the following specimens in Victoria only:

Short head Seahorse (*Hippocampus breviceps*)

Pot Bellied Seahorse (*Hippocampus abdominalis*)

Normal practice in the case of the Victorian permit is to collect less than the permit allows.

3. Statement of General goals/ aims and or purpose of operation

3.1 I wish to continue providing both dragons and Seahorses to the World public aquariums and in doing so provide a unique viewing experience.

3.2 It's my hope that I can continue with this unique family business: in providing healthy home grown Syngnathidae specimens and to continue exporting proven husbandry techniques.

I believe that this operation which has been operating for longer than 13 years was the first for Australia. It was the first in the sense of providing tank-raised specimens, others (including pqaquatics.) have had in the past relevant State permits to collect and forward overseas wild specimens. This no longer permitted.

Also I have been working with Dragons and related species for over 35 years: In that time

I have accumulated a wealth of knowledge on the husbandry requirements of these fish.

3.3 The general principle of obtaining limited numbers of specimens and allowing the young to grow for display purposes is a good management practice.

3.4 It is not my intention to provide Seahorse and Dragons to the private market but only to proven institutions or to those aquariums willing to accept advice and information. Most institutions rely heavily on net working with other successful establishments. The past difficulty that some operators may have had with keeping Dragons has long gone. This I believe has been partly due to transporting only tank raised small specimens and a better understanding of the husbandry needs of both types of fish. By allowing only captive raised specimens to be exported, pressure on Governments (from commercial operators) to remove wild specimens is greatly reduced.

3.5 To aim to breed Dragons. The race is still on for someone to regularly breed Dragons in captivity. It's not unusual to hear of a large Public aquarium having egg transfers between females and males. However as yet this has not been repeated consistently.

In the past I have had only partial success with (3 year old plus) Dragons. My current problem is not being able to access mature females. In the last few years I have been limited to collecting only 4 of each species. In the case of Weedy Sea dragons I have concentrated on berried males.

Juveniles hatched are readily taken up by overseas aquariums which mean any prospective females have long gone before they are mature enough to breed.

However this does not mean I am not actively involved with the aim of captive breeding dragons. Through the internet I keep in touch with what is going on and I am continually giving advice to some very large facilities.

I continue to monitor and observe wild Dragons reproduction behavior. Recording such behavior on video and slowly over time build up knowledge about the animal's behavior.

Last year I attended a Dragon symposium in Texas. It was hosted by the Dallas World Aquarium and the Delegates where mostly from USA.

The topics they choose to discuss were.

- (1) Weedy Sea dragons and their Habitat
- (2) Sex Identification. What are the identifiable difference between males and females?
- (3) What do Dragons eat-what is their food? Mysids?
- (4) Weedy Sea Dragon and reproduction
- (5) Weedy sea dragons. Diseases and how to deal with them.

I was asked to attend and provided some wild U/W footage relevant to their chosen topics. **One short DVD was shown as an introduction to each of the topics.** This gave the delegates a chance to view Weedy Sea dragons in the wild. Many had been dealing with Dragons in their Aquariums for over 10years but had never viewed the typical habitat of a Weedy Sea dragon. The footage shown was able to nullify some misconceptions.

Some e-mail comments are attached and were very encouraging and to a certain extent unexpected. Please read attached e-mail comments.

The DVD's (5) are included with this application and hopefully will be viewed by someone in making a decision on my assessment

3.6 Seahorses of both varieties found in Victoria have no difficulty in breeding in captivity and I wish to continue my program, which is to rely on 4 or less adults per year to do my breeding rather than F1 or F2 population. In the light of other large-scale operators entering in to the market there does not seem too be much point in burdening one self with administration details and creating space for all the different generations that can be produced. The numbers I need to produce will be probably less than 50. These will easily satisfy my Public Aquariums clients. Every year as institutions take on a breeding role of Seahorse the demand gets less. Only bred or tank raised specimens are sent. Most institution I deal with prefers this method. Any new Commercial operator needs to consider whether there is a large enough demand for specimen before sinking funds into a new operation.

The average marine aquarium hobbyists frequently have their Seahorse breed. The real difficulty is providing their offspring with food.

3.7 Advice via the telephone or Internet is always given to those who ask.

3.8 Continue with "Open house policy" Visits from interested individuals or groups with notification are welcomed

For the month of Oct 2009 we have had a visitor from QLD and one from USA ('New England Aquarium' in Boston) all visiting to talk about Dragons.

3.9 It has always been my general policy not to send any collected Adult- only tank raised or tank bred specimens. Current permits in fact do not allow this

Adults collected if no longer needed and due to permit restrictions cannot be released they will be given to the Melbourne Aquarium (FOC) to be used in their Displays and or breeding program.

4. Description of Management measures

The intention is to continue following guideline as set by the appropriate Authorities

It will be my general policy not to send any collected Adult. Only tank raised or tanks bred specimens. As already mentioned the younger tank born animals travel better and are better suited for aquarium displays.

Collection of very limited numbers from a variety of locations

Numbers to be collected are: 1 Berried Leafy sea Dragon
4 Berried Weedy Sea Dragons

4 Short headed Seahorses
Pot Bellied seahorses

- 4.3 Method of collection. Is by hand
- 4.4 Area of collecting. As per permits.
Port Phillip Bay.
Where possible a variety of location to
Minimize any possible impact.
Away from the usual accepted viewing areas
- 4.5 Time and duration as per permits. For WSD- Nov-Jan and LSD Oct-
March. Summer period. All other
Syngnathidae when needed.
- 4.6 Impact on the habitat. Zero Impact on habit.

5. Monitoring and assessment

5.1 Due to the limited numbers of specimens allowed to be removed and the nature of the proposed program there does not seem to be much point in an extensive monitoring program. I believe we will have a minimal impact.

5.2 All collecting is completed away from the normal viewing areas.

In the past we (I) have dived specifically for and counted numbers of Dragons and Seahorses. In any one week on a dive (and in the right location) for 60 minutes it would not be unusual to view any thing between 10 to 70 Weedy Sea Dragons and anything between 3 -50 Pot bellied Seahorses. Within some viewing sites it is estimated that there would be over 250 WSD and more than 100 Seahorses of both species. It's not unusual for Victorian working Abalone divers to occasionally come across Dragons while going about their normal working day. They (Dragons) are very wide spread even though they do seem to have favored spots where large numbers can be seen.

I have taken it upon my self to monitor the local population of local Weedy Sea Dragons with a video Camera-and I have accumulated many hours of underwater footage. (See short DVD's (5) provided)

This includes footage of courtship, feeding, berried males, dragons in large congregations and interacting with local fish. From time to time I have made this footage available for public viewing. In the process of many hours of observing and filming it's obvious that the dragons in Victoria are in good numbers and are easily found by the average diver. In Victoria it's not hard to film up to 7 Dragons in the one frame and if you wanted to--film up to 40 plus separate dragons in a 60 minute period. Of course you do need good weather conditions. The DVD's do show the Dragons population in Victoria is in good shape.

6. Management Strategies to ensure the sustainability of the species is not threatened.

6.1. There has never been any local evidence that suggest that our local Syngnathidae were extensively targeted for either the dry food industry or the aquarium trade. If in the unlikely situation these animals become endangered because of my small operation then I naturally would cease operation.

Within the current guidelines and management programs this is unlikely to happen.

..

My current under water footage of local dragons proves the numbers are not threaten under the current restrictions ([view all DVDs provided](#))

It's my intention to continue to document my operation through video and I am continually capturing Weedy Sea dragon scenarios on video-this has been for my own personal satisfaction and if good enough may be for public viewing. The feedback I have had back from friends is positive. I have accumulated many hours of Dragons footage some of which is included with this application in 2009. I probably dive/view/film Dragons on average once a week.

6.2. Permits only allow very limited numbers-please veiw as attached documents. Therefore it's the aim to continue following the limits set by these permits and to work within guideline set.

6.3 I am available to show overseas or local divers the extensive population of our different sygnathides. Contact can be made through the address provided. I always promote the husbandry needs of the fish concerned and willing share ideas.

6.4 My general aim is to breed Dragons (or at least be actively involved with other institutions); replacing the occasional adult to keep a genetic diversity. However as already been hinted at my breeding tanks may not be large enough. At some stage we may have to purchase a large factory-something I have been reluctant to do as there are many unknown factors that make the risks high.eg Limited permits no licenses issued.

6.5. Activilly discourage wild source of Dragons.

Most of the Public aquariums I deal with realize the problem associated with wild Syngnathidae while in the USA they discourage each other form sourcing wild stock. They know that large wild animals stress easily and have problems adapting to the new environments. Large Dragons do not travel well-often becoming very stressed before arriving. Wild fish often carry diseases ([See appropriate DVD](#)) and these can be transmitted to established aquariums and their inhabitants.

It's could be poor economics to purchase wild stock. The risk in transmitting wild disease to established aquariums is high.

6.6 According to Rudie Kuitert in his book Seahorse Pipefish and their Relatives he

mentions "Habitat alterations are the real threat for Seahorses" and "It's unlikely that Seahorses will become extinct from collecting them. Loss of habitat and pollution is the greatest worry to the possible decline in some populations" In my daily diving practice I continue to encourage others to protect habitat. All employees are encouraged to do the same.

7. Compliance.

7.1. I am in favour of site inspections by nominated persons and record keeping of numbers.

7.2 Continue with Specimen Export record forms provided by Environment Australia.

7.3 Photographs do not serve much purpose as growing fish change appearance rapidly. I would never be in favour of marking or tagging, as it's in my opinion that such action will cause bacteria infection or severe fungal problem leading to death of the individuals.

7.4 Monthly returns (reports) are given to the Victorian authorities as part of the conditions of their permit.

7.5 All State Authorities are notified before any collecting is done-it's a violation of the permit if collecting is done without notification.

7.6 Its not unusual to have a 'spot check' by either Fisheries Officers, local Police or Water police and asked to either have a quick look at what you have on board the boat and check permits and any other relevant paper work.

7.7 Victorian Fisheries also do spot checks on ones facilities.

7.8 Public Aquariums in the USA net work among themselves and are aware of those who have appropriate export permits. They are also familiar of what aquarium raised dragons look like-size and shape. It wouldn't be long before reports filtered through of an Aquarium with a Dragon that was wild caught.

Pang Quong 2010