



# KELP KRAWLERS DIVE CLUB

March 2004

Volume 20, Number 3

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## What's up with Scooters? by Jerry Ehrlich

I have had several divers ask questions about the scooters we use; here is a summary:

### Q – How fast do they go?

A – The Aeris- Mako ([www.diveaeris.com](http://www.diveaeris.com)) style that we use is capable of about **2.5 knots**, well over twice as fast as a fully kitted diver can swim.

### Q- How much do they weigh?

A – 50 pounds out of the water, zero in the water.

### Q- How long do they run?

A – That depends on how fast you run them. Running them at about **1/3 of maximum speed**, like a strong swimming rate, they will last for over **2.5 hours**. We have never even come close to draining them on a 2-hour dive. Crank them **wide open** and you get about **90 minutes** of continuous burn time. We are not scootering the entire time, we stop and look at stuff and poke around too :o)

### Q - How do you control the speed?

A -The scooter has a **simple spring-loaded on/off trigger in the handle**. That turns the motor on or off. The motor always turns 750 rpms. The **pitch of the propeller controls the actual speed**. There is a dial on the back of the prop that you twist to increase or decrease prop pitch. The dial is numbered 1 to 9, 9 being maximum pitch.

### Q – How can you stay with your buddy?

A – **One diver sets the pace and the others adjust the pitch of the prop to match speeds**. Our units have equally indexed props, so when the pace diver signals we are going to run on a prop pitch of three, we dial to #3 and we are pretty well matched in speed. It helps that we all use the **Hogarthian/DIR** gear configuration, so we all have a the same good hydro dynamics

### Q – What do you do with them when you get where you are going?

A- The scooters are **neutrally buoyant**. You just let go of them and they float along beside you. Wherever you “put” them in the water column, they tend to stay right there. They are tethered to you and won't go anywhere.

### Q – Don't your arms get tired?

A – We use a harness that is attached to the scooter and hooks to the D- ring on the crotch strap of our BC (back plate/wing) with a large bolt snap. The scooter handle is at comfortably extended arms length and you operate it with one hand. **All of the pull is transferred to your BC harness; there is no load on your arm**. You just rest your hand so the trigger slips between your fingers and away you go.



### Q – What if you stick your hand or something in the prop?

A – The propellers have a **very sensitive clutch that free wheels the prop** if anything thicker than water touches the blades. **You can stick your bare hand into the spinning prop and it will not injure you**.

### Q – How do you navigate?

A- **It only takes one hand to operate so your compass is on the opposite hand**. We generally break these sorts of tasks up between team members.

### Q- Are they easy to learn how to use?

A -Once the harness is set up properly, they are easy enough to operate, but it **does take practice**. **There is considerable task loading to integrate a scooter completely into your diving**. Good basic skills are a must. Buoyancy needs to be second nature. The scooter can over power your BC until you stop, then you either sink like a stone or begin rising. **It took us about 30-50 hours to be “comfortable.”**

Q – What happens if you are a long way from your exit point and your scooter craps out?

(Continued from page 1)

**A – We always dive them in pairs or trios. We also leave plenty of burn time in reserve when planning a dive, just like breathing gas.** If one dies, you tuck it between your legs, grab the backside of your buddy’s crotch strap and your buddy tows you back. It is a simple, effective technique that requires a little practice, but works very well. We use the same technique if an air share is necessary.

**Q – How much do they cost?**

**A – They can be had on eBay for about twelve to fifteen hundred for a used Aeris Mako. New ones list for \$2,700, but they can be had for around 2 grand or less.** These are fine for dives to 180 feet. Deeper requires a different tool. **The Gavin scooter ([www.gavinscooters.com](http://www.gavinscooters.com)) sells for \$3,500 plus batteries and a charger.** They are a beefed up Mako. **Lots more power, but shorter burn times.** They are good to 500 feet and you can put different length noses on them to accommodate more batteries if you need them.

**Q – Why do use them?**

**A – Well, they are fun :o) You can deal with lots of current that would otherwise present a serious obstacle to the dive. You have the ability to cover a great deal of ground on one dive. We can dive the complete Sund Rock MCA on one dive. Including the wreck to the north and the burial monument off the south end of Sund Rock.**

**One of the biggest advantages is less inert gas loading on deep dives. Swimming is exercise and requires more work and more breathing gas than just laying there for the ride. Gas consumption is much lower and so is inert gas loading. All good.**

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## Calendar of Events

**March 16th:** Club meeting—U/W Imaging—a 3 part presentation by members Sue Treinen, Scott Boyd, and Jamie Welsh.

**April 20th:** Club meeting.

**May 8th & 9th:** Wooden Boat Festival Touch Tanks

**May 18th:** Club meeting.

**June 15th:** Club meeting.

**July 20th:** Club meeting.

**August 17th:** Club meeting.

**September 21st:** Club meeting.

**October 19th:** Club meeting.

**November 16th:** Club meeting.

**December ?:** Christmas Party

## Treasurer’s Report: Wayne Campbell

According to **Wayne**, we have **EXACTLY \$593.43** in our **Kelp Krawler** accounts!

## Rockfish Life History: by Tasha Geiger

**I am passionate learning about fish, especially rockfish and I am even more passionate sharing this information with others. The following article describes information I have gathered on my favorite group of fishes-*Sebastes*.**

**Rockfish** are members of the genus *Sebastes*. **Sebastos**, the origin of *Sebastes*, means “**magnificent**” in Greek. Their magnificence comes from the variety of sizes, colors, and long-life. One of the smallest rockfish, the **Puget Sound Rockfish *Sebastes emphaeus***, grows to about seven inches, while the **Boccaccio *S. paucispinis*** can be 3 feet long. The color variation is beautiful. **Each species has a distinct coloration**, some more flashy than others. **Observing rockfish is like looking into a box of crayons containing different shades of red, yellow, orange, black, green and brown.** These magnificent fish have acquired common names, like **rock cod** and **sea bass**. They may be mistaken for their smaller cousins, the **sculpins**. **Rockfish** are members of the family **Scorpaenidae**, the **scorpionfishes**. Unlike the tropical species, **Washington rockfishes do not have venomous spine.**

About **63 species of rockfish** are known from the **northeast Pacific Ocean-** ranging from **southern California to the Gulf of Alaska**. The eight species of *Sebastes* most commonly caught in Puget Sound are listed below:

Black rockfish	Copper rockfish
Bocaccio rockfish	Quillback rockfish
Brown rockfish	Yelloweye rockfish
Canary rockfish	Yellowtail rockfish

**These rockfish species are currently on the Washington State Species of Concern List, which lists endangered, threatened and sensitive wildlife species. Three species (brown, copper and quillback) were considered for listing as endangered species by the National Marine Fisheries Service (NMFS) in 1999. The NMFS’s conclusion, released in 2001, did not recognize enough current evidence to list these rockfish as endangered, but the agency did strongly advise fish managers that increased harvest levels, increased habitat degradation, and negative changes to the ecosystem, “...could result in increased risk of extinction...”, for copper, quillback and brown rockfish in greater Puget Sound.**

Many of the characteristics of rockfish make this species **vulnerable to overfishing**. For example, rockfishes aggregate with other species that may have slightly different reproductive and growth patterns. This mixing of stocks makes it impossible to single out one species of rockfish for harvesting. **Other characteristics are increased fecundity (egg/larvae capacity) with age, extreme longevity, late sexual maturity, comparatively low productivity to biomass ratio, and specific habitat requirements by age.**

All *Sebastes* rockfish species are **slow growing livebearers.**

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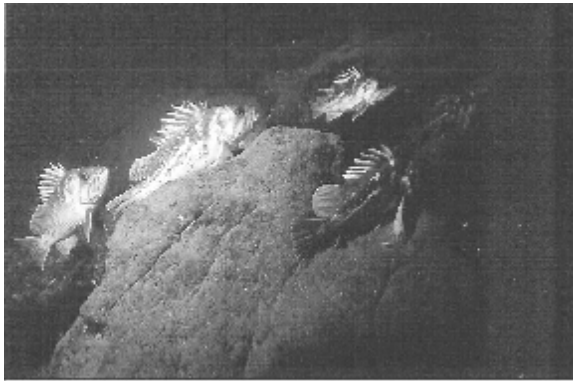
**Rockfish: continued from page 2**

They have a **gas bladder** that expands or deflates depending on **water pressure**, and many can live to a remarkably old age for a fish; up to 118 years or older for a yelloweye, *Sebastes ruberrimus*.

**Rockfish** are internally fertilized. They have a **gestation period of about three to six weeks and give birth to live young**. **Rockfish larvae** are from 3.5 mm to 6mm long at birth depending on species. The time of year for mating and parturition (birth) varies between species. **Fertilization can occur during winter or spring and young are released during late spring or summer, in time to feed on newly hatching zooplankton.** Females can hold sperm for several months before fertilization occurs, timing release of young to coincide with available food. **Rockfish usually have one spawning period a year.** Females tend to be larger than males and males mature sexually sooner than females.

Fecundity increases with the size of the female. **For example, in copper rockfish a 24.2 cm female carried 15,600 larvae and a 47.4 cm female carried 640,000 larvae.** Age of sexual maturity also varies between species. Some **rockfish** may mature by **age 3; others may not be sexually reproductive until 20 years or older.**

**Rockfish** larvae feed on **zooplankton**, including **copepods and amphipods**. In turn, **small rockfish are eaten by larger fish such as lingcod, wolfeels, and cabezon.** As **rockfish** grow, their diet shifts to **larger crustaceans and small fish.**



*Photo by Sue Treinen??*

**Adult rockfish** can live from **surface depths to 366m on rocky or rocky sand substrates.** Many move into shallow water near **kelp beds or eel grass beds to release their young.** Rockfish larvae can be from 3.5 mm to 6mm long at birth. At this stage of life they are **benthic, with some ability to move up and down in the water column.** **Juveniles at 40mm to 50mm in length move from shallow areas into rocky reef areas or are found within kelp beds.**

**Rockfish** maintain small **home ranges around rocky reefs.** They are not known to migrate long distances, especially as compared to salmon. **Studies show that brown rockfish will return**

**to their home sites after being displaced up to 25 kilometers away.**

Most **rockfishes** are solitary (meaning that they do not school), **yet they are found within mixed stock groupings.** There is some evidence that suggests rockfish will move between low relief to high relief reef areas at different stages of life, perhaps following available food.

Although there are **several species of rockfish in Puget Sound,** only a few have been studied in any detail. The most abundant information available on **Puget Sound rockfish** concerns the species of **copper, brown, quillback, and black rockfishes.**

**The larger the fish, the more young it produces.** When the larger, more mature rockfish are harvested, this decreases the

recruitment level of the juvenile fish to reproduction age. **As the mature rockfish are fished out of the population, the younger sexually immature fish become the next harvestable group.** **These young fish are captured before they have had an opportunity to spawn.** It is difficult to manage the fisheries by size because sexually immature and mature fish can be similar enough in size to be taken by the same fishing gear.

### **February Meeting Attendance:**

Karen & Mike Beyer, Scott & Janet Boyd, Craig & Deb Brown, Wayne Campbell, Don Chase, Brad Congdon, Jerry Ehrlich, Steve Fischnaller, Steve Fornoff, Tasha Geiger, Rodger Gomez, Steve Griffith, Duane Hamrick, Jerry Helm, Becky Lundin, Alan Niles, Don Noviello, Noel Ostrander, Hobert Pannkuk, Kathy Pannkuk, Mark Pannkuk, Richard Penny, Cherryl Scott, Ken Short, Ingrid Sutton, Gayle Thronson, and Greg Volkhardt for a total of 30 people.

**Greg Volkhardt** gave us an update that the **Fish & Wildlife Commission** made a determination to close the loophole that allowed fishing at **Octopus Hole** within a certain distance from shore. Thanks to everyone who helped to make this possible!

Our speaker for **February** was **Craig Brown** of **Capital Divers.** He gave a presentation on cave diving, showed us some of his video from a recent trip, and explained some of the techniques and guidelines to be followed. I never thought that I would be interested in diving in an over-head environment, but after seeing his video, I might add it to my list!

**Kelp Krawlers** supports **Divers Alert Network** and strongly encourages you to join! The advice and insurance available through **DAN** could save your life. Sign up on the web at **[www.DiversAlertNetwork.org](http://www.DiversAlertNetwork.org)** and use the club sponsor number **392620**

### Tube-Dwelling Anemone (*Pachycerianthus fimbrriatus*): by Scott Boyd

This common anemone is found on mud and sand bottoms around **Puget Sound** at **depths ranging from intertidal to about 100'**. A unique feature of this anemone, which is actually a coral, is that it makes a **parchment-like mucus tube to live in**. Most of this tube is actually buried below the mud, and is not visible to divers. Below what you see is a dark-colored, slime coated tube that can extend several feet below the substrate in large animals.

**These anemones are often found in large fields**, where they can reproduce to rapidly cover favorable territory. The mouth, placed on the central disk, is surrounded by short labial tentacles and longer marginal tentacles. **The semi-translucent tentacles may be white, brown, black or orange**. This species grows to a **height of about 12"** and covers a range from **Alaska to Baja California**.

The **tube-dwelling anemone** is the favorite food of the **giant**



**nudibranch (dendronotus iris)**, which will launch itself at the head of the anemone with amazing speed, and will frequently be pulled part way into the tube of anemone as it retracts. **Predation by such nudibranchs is rarely fatal to the anemone.**

### March Madness!!!

Our next meeting is **Tuesday, March 16th**, at **Dirty Dave's Pizza Parlor**. This month we will have a **3 part presentation on Underwater Imaging**, put on by some of our members.

**Sue Treinen:** U/W still images on film

**Scott Boyd:** U/W still images digital

**Jamie Welsh:** U/W Video

If you have ever wanted to get started in U/W photography, these are the people to listen to! They have many years of combined experience between them.

### March 6th Club Dive - Octopus Hole

Saturday, **March 6th**, was a **club bbq** and **night dive at Octopus Hole**. OK, the bbq was at the boat launch at the **Rest a While Marina**, the dive was at **Octo Hole**. It was a beautiful day and nice evening. Six **Kelp Krawlers** did the dive: **Karen & Mike Beyer, Steve and Carolyn Fornoff, Tasha Geiger, and Brian Guinn**. You'll have to ask them how the dive went, since I opted not to stick around and find out! Thanks to **Jerry Ehrlich** for being the grill-master!!

### Wooden Boat Festival - Touch Tanks

The **Wooden Boat Festival** will be the weekend of **May 8th & 9th**. Sunday the 9th is **Mother's Day**, so bring your mom along to see the touch tanks!

We will need **volunteers for collecting the critters on Friday night, May 7th**, and a **replenishing dive on Saturday, May 8th**. Friday night is set-up, and Sunday night is tear-down. **We will need people to sign up to "work" at the touch tanks both Saturday and Sunday, and for set-up and tear-down. The hours Sat are 10am - 6pm, and Sunday 11am - 5pm. Sign up sheets will be available at the March & April meetings.**

This is a fun event, and everyone enjoys it! It's a great opportunity to educate people about the marine life in our area.

### Diving humor (?)

Three instructors and their students are on board a dive boat in the middle of the ocean— there's a **NAUI instructor, a PADI instructor, and an SSI instructor**. Everything is going fine, until the boat springs a leak, and starts to sink.

The **SSI instructor** says to his students, "Okay... we're in the middle of the ocean, so we might as well do our deep dive."

The **NAUI instructor** says to his students, "Okay... we might as well do our navigation dive, so let's get our compasses out and swim towards shore."

The **PADI instructor** says to his students, "Okay... for \$25 extra you guys get to do a wreck dive!"



**Underwater Communication: from the website: [www.diveoz.com.au/uwc/uwc-main.asp](http://www.diveoz.com.au/uwc/uwc-main.asp)**

Communicating underwater is an important skill to learn. For some it is much easier to communicate, with rebreathers, they are able to have a quite legible conversation in their mouthpieces, some, particularly commercial divers or in a number of dive schools, instructors and students use underwater "radios". For the rest of us, it's a wide assortment of hand signals or writing on a slate.

When using hand signals underwater, they are usually done in front of the chest. There are also a number of simple signals that are performed with your torch etc.

Of course, a big part of communicating underwater is the need to communicate numerical data, like remaining gas, deco time etc. You could use a slate which is pretty easy, or you could master the 10 easy hand signals that are used to represent numerals like below.

**One****Two****Three****Four****Five****Six****Seven****Eight****Nine****Zero**