**1) A list of the related cruises. (We are working on automating the generation of Level 1 metadata from the UNOLS cruise schedule database and so we'd just make sure that the cruises you need have been included.)**
During two cruises, jdfr98 and jdfr99, we collected samples of epifaunal assemblages from several different sulfide edifices, with a custom-built device named the Chimney Master.

- jdfr98: R/V Atlantis- AT03-24, Alvin dives 3255- 3264, 29 Jul to 8 Aug 1998
- jdfr99: R/V Atlantis- AT03-38, Alvin dives 3453- 3464, 24 Aug to 9 Sep1999

**2) A list of the related ALVIN dives. (Similarly we are working on automating the generation of Level 2 ALVIN metadata from DSG ALVIN database. If you have ROPOS dives involved as well we'll need more information from you).**
During those two cruises, we used the Chimney Master to collect 11 quantitative samples on 5 Alvin dives. During each dive, up to three collections could be made with the Chimney Master. Therefore, each collection is identified by the cruise, the dive, and subsequently the collection number: cm1, cm2, or cm3.

In 1998, on dives a3259, a3263, and a3261, we collected four quantitative samples with the Chimney Master, from the sites Easter Island and Strawberry Fields. In 1999, on dives a3460 and a3463, we used the Chimney Master to collect seven additional samples from the sites Mothra and Bastille.

- a3259: Strawberry Fields; cm1 and cm2
- a3261: Strawberry Fields; cm1
- a3263: Easter Island; cm1
- a3460: Bastille; cm1, cm2, and cm3
- a3463: Bastille; cm1, cm2, and cm3
- a3464: Mothra; cm1

**3) A narrative speaking to methods, format or organization of the data file, precision and accuracy, and any other useful information**
In 1998 and 1999, we made eleven quantitative collections of epifaunal assemblages from several sites at the Endeavour Segment, of the Juan de Fuca Ridge. We collected these samples with a hydraulically actuated device lined with 63 μm mesh, named the Chimney Master. At the time of collection we temperature surveyed the collec site and confirmed a collection was quantitative by the presence of a clean sampling scar on the sulfide edifice surface and whether the Chimney Master remained closed until the sample was contained in an isolated compartment of a polyvinyl chloride (PVC) box. The collection site, the temperature survey and the collection scar were documented on video. Immediately after collection, we preserved the samples in either 10% formalin or 70% ethanol and changed to fresh 70% ethanol for shipping and storage. After returning to the lab, we first sorted and enumerated all of the macrofauna (>250 μm) to the species taxonomic level. Second, we constructed size frequency distributions, for all species that had more than 30 individuals in a single collection, with morphometric measurements that are highly correlated with wet weight biomass ($R^2$ > 90%). For gastropods (limpet:

*Lepetodrilus fucensis*, glob snail: *Depressigyra globulus*, turban snail: *Provanna variabilis*), we used a geometrically increasing sieve series (0.25, 0.5, 1, 2 and 4 mm) to divide the species population into size classes. For non-tube dwelling polychaetes (terebellemorphs: *Paralvinella* grasslei, *Paralvinella pandorae*, and *Paralvinella sulfincola,* and polynoids: *Brachinotogluma grasslei*, *Branchinotogluma hessleri*, *Branchinotogluma sandersi*, *Lepidonotopodium piscesae*, and *Opisthostrochopodus tunnicliffeae*), we measured the width of the seventh setiger according the methods described by McHugh et al. 1989. For the tube worm *Ridgeia piscesae,* we measured the vestimentum length of the worm, however several morophometric measurements of the tube worm, *R. piscesae* were good estimates of size, including tube anterior diameter, tube length and worm vestimentum breadth. The subsample of individuals used to calculate the size frequency were also dried (at 60$^{o}$C and 500$^{o}$C) and weighed to determine the average ash-free dry weight of an average individual. Then we used a conversion factor of ash-free dry weight to wet weight per individual to calculate the estimated wet weight of the entire species population.

In this spreadsheet, we have documented the abundance of each species, the mean, minimum, and maximum size of the individuals of the species population, and the average ash-free dry weight per individual of each species. All size measurements are reported in millimeters and mass is reported in grams.

McHugh, D. (1989). Population structure and reproductive biology of two sympatric hydrothermal vent polychaetes, *Paralvinella pandorae* and *P. palmiformis*. Marine Biology. 103: 95- 106

**4) suggested key words**

- Juan de Fuca Ridge
- Endeavour Segment
- Sulfide edifice
- Epifaunal assemblage
- Hydrothermal vent community
- *Ridgeia piscesae*
- Species diversity
- Size frequency
- Biomass
- Hydrothermal chimney

**5) a narrative telling how you would like the data cited or acknowledge when used--a literature reference, some other form of acknowledgement, or a request to contact you (or Chuck?) for current information**

I presented a poster based on these data entitled, "Epifaunal assemblages from a Juan de Fuca Ridge sulfide edifice: Structurally different and functionally similar?" at the Second International Symposium of Hydrothermal Vent Biology (Brest, France), in October 2001. I have also submitted an extended abstract of this work to the proceedings of this symposium, to be published in *Cahiers de Biologie Marine* in 2002. Any person who wishes to cite or acknowledge this data should contact myself, Breea Govenar

(bwg122@psu.edu) or Dr. Charles Fisher through the Department of Biology, The Pennsylvania State University, 208 Mueller Laboratory, University Park, PA 16802, USA.