

Intertidal ID. Day 1: “Individuals”



Focus:

Our top finds

- ID with EZ-ID guide
 - flow by phyla
- Fun facts & features

“individuals” (vs. “colonial” / aggregated)

PHYLUM CNIDARIA:

Jellies, anemones,
hydroids & corals

Simple body plan

- Bag-in-a-bag
- Nerve net

Nematocysts

sting or stick





Doug Stark

ANEMONE:
Moonglow / burrowing anemone
Anthopleura artemisia



Pink-tipped green anemone
a.k.a.
Aggregating anemone
Anthopleura elegantissima

Doug Stark photos



ANEMONE:



Stubby rose / red-beaded anemone
Urticina coriacea

Doug Stark photos



Doug Stark photo

ANEMONE: Christmas / Painted anemones

Urticina crassicornis and ...



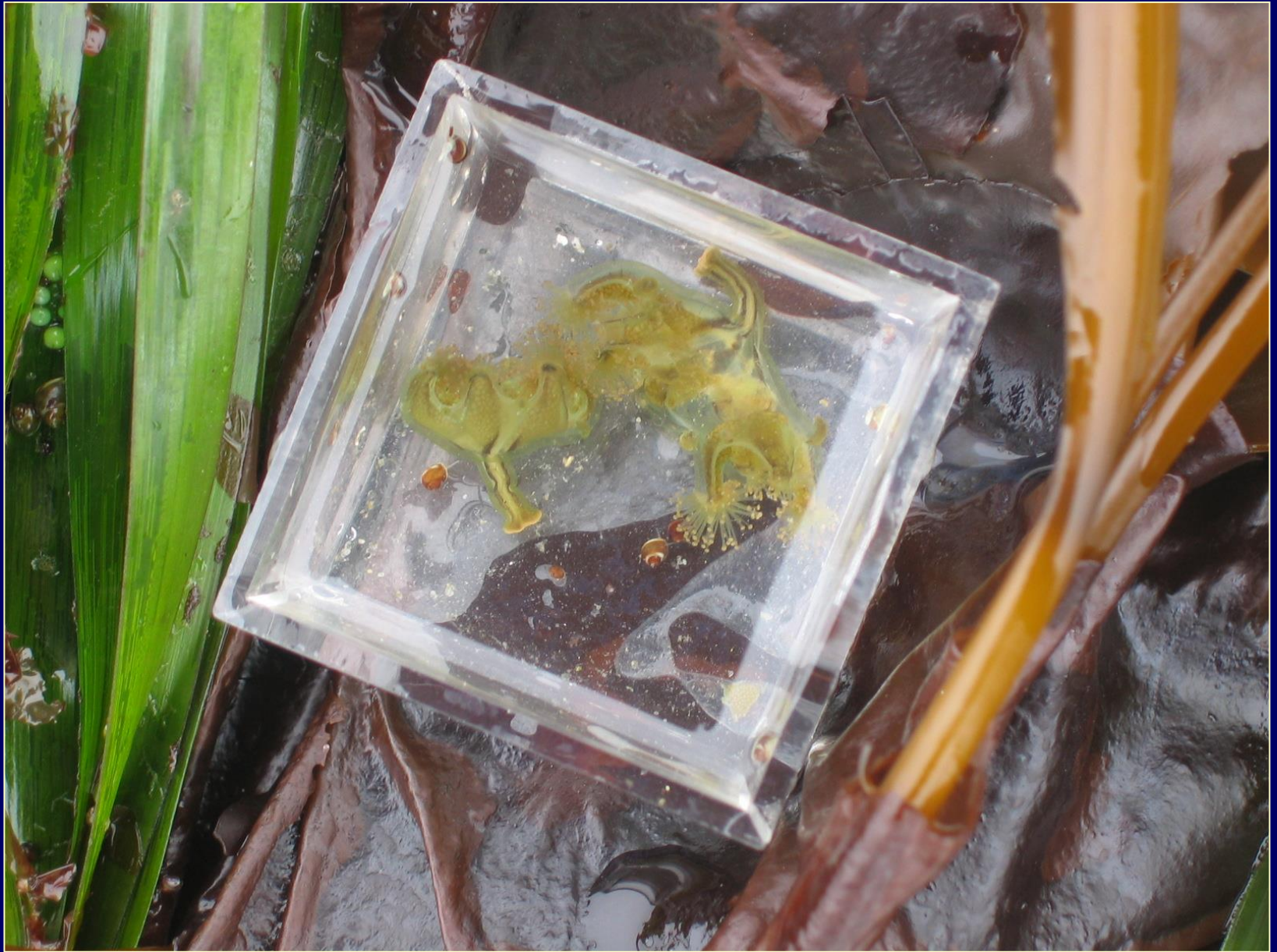
Doug Stark & Mary Jo Adams photos

Plumose anemones
Metridium sp.



Proliferating /
brooding anemone

*Epiactis
prolifera*



JELLIES: Stalked Jellies, *Halicyclystus* sp.

WORMS

PHYLUM NEMERTEA: RIBBON WORMS

- Mucus coating
- Proboscis, inject venom
- excrete poison (few predators)



Mary Jo Adams

Green ribbon worm
Emplectonema gracile

NEMERTEA- RIBBON WORMS



red ribbon worm / orange nemertean
Tubulanus polymorphus

NEMERTEA - RIBBON WORMS



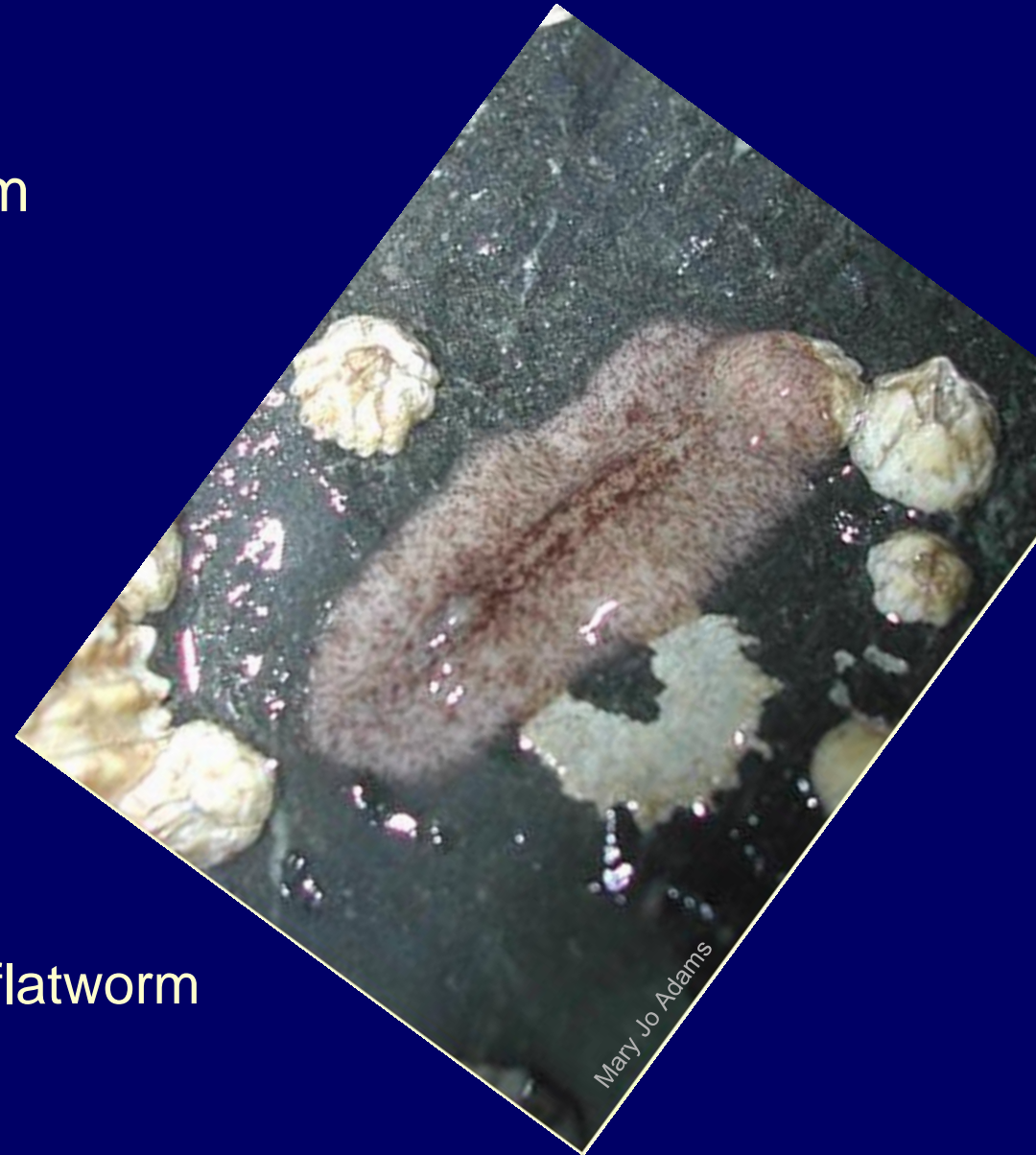
Purple ribbon worm
Paranemertes peregrina

“Don’t let the fragile appearance of this species fool you. Paranemertes is a voracious predator known to attack, kill, and consume polychaete worms larger than itself.”



PHYLUM PLATYHELMINTHES: FLATWORMS

- Simple digestive system
- Breathes through skin using flattened shape
- Often under rocks



Free Living flatworm

Mary Jo Adams

PHYLUM ANNELIDA: SEGMENTED WORMS

polychaetes,

“Poly” = many, “chaeta” = bristles

- Burrow or free-moving
- Deposit feeders, carnivores
- Eversible jaws



SEGMENTED WORMS:

NEPHTYIDAE



Sand worm or “goddess worm”

Nephtys sp.

SEGMENTED WORMS

NEREIDAE



Pile Worm, Sea Nymphs
Nereidae sp.



SEGMENTED WORMS



Nereidae

Giant pile worm

Tidepools



Mary Jo Adams



Jim Ramaglia photo

Calcareous tube worm

Serpulidae

Spirorbidae

Dwarf calcareous tube worms



SEGMENTED WORMS

Arenicolidae - Lugworms



Lugworm

Abarenicola pacifica

SEGMENTED WORMS

Terebellidae - spaghetti worms
(fine tentacles at anterior end)



See spaghetti-like tentacles
sticking out from under rock



SEGMENTED WORMS Polynoidae – scale worms



Free living scaleworm

18-segmented worm

Halosydna brevisetosa

SEGMENTED WORMS

Scaleworms Polynoidae



Commensal scaleworms (*Arctonoe* sp.) on sea stars

Red-banded scaleworm *Arctonoe vittata*

Commensal symbiosis



MOLLUSKS (continued)
Gastropods: SNAILS AND SEA SLUGS



Checkered periwinkle & Sitka periwinkle
Littorina scutulata *Littorina sitkana*

SNAILS AND SEA SLUGS



Frilled whelk
Nucella lamellosa

SNAILS AND SEA SLUGS

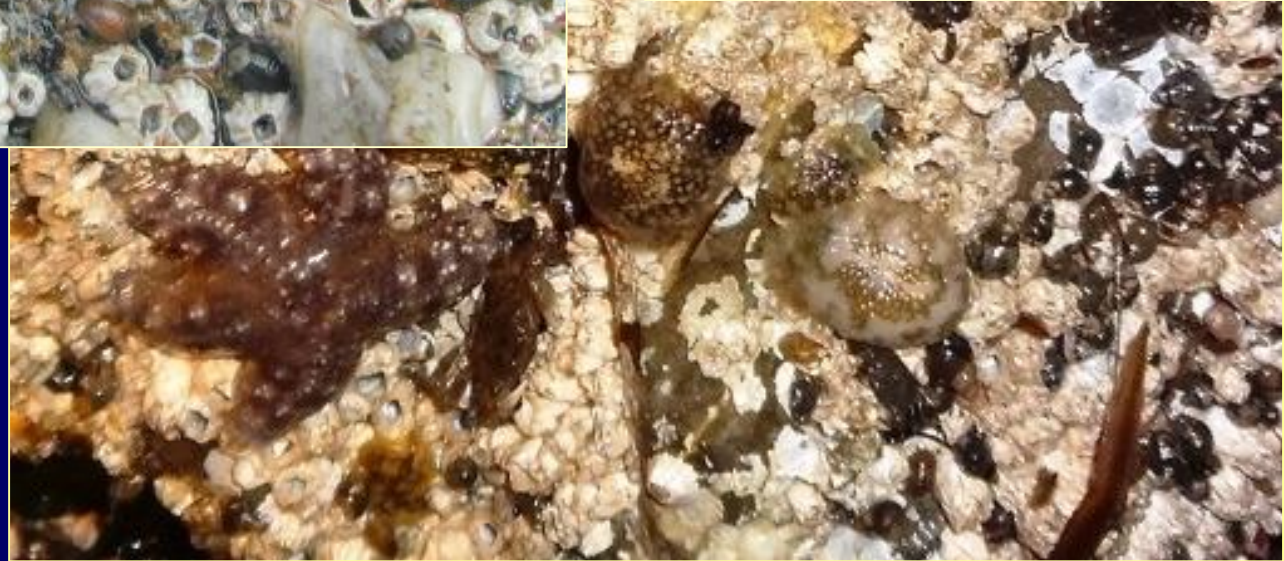


Dire whelk
Lirubuccinum dirum

SNAILS AND SEA SLUGS



Chris Brown



Barnacle-eating nudibranch
Onchidoris bilemellata

SNAILS AND SEA SLUGS



Bubble snails!

Haminoea or *Aglaja* sp.

SNAILS AND SEA SLUGS



Al Hanners photo

Hooded nudibranch (lion's mane)

Melibe leonina

SNAILS AND SEA SLUGS



43

Shaggy mouse nudibranch on pink-tipped anemone
Aeolidia papillosa *Anthopleura elegantissima*

Doug Stark

SNAILS AND SEA SLUGS



Opalescent nudibranch
Hermisenda crassicornis



Shaggy mouse *Aeolidia papillosa*

SNAILS AND SEA SLUGS



Taylor's Sea Hare
Phyllaplysia taylori

(Mollusks continued)

Bivalves: Clams, oysters,



Whatcom County photo



Doug Stark

Heart Cockel
Clinocardium nuttallii

& Pacific littleneck
Leukoma (Protothaca)
staminea

cp. Manila (Japanese littleneck)

Venerupis philipinarium

(Mollusks continued)
Bivalves: Clams, oysters,



Mary Jo Adams photo

Jingle shell oyster / Green false jingle

Pododesmus macrochisma

PHYLUM MOLLUSCA: CHITONS, LIMPETS

- Why don't they dry out?
 - Hard shell/plates, closed up
- What do they eat?
 - Grazers, filter feeders, predators
- How do they eat?
- Who eats them
 - Humans, seagulls, sea stars, fish
- Other cool factoids
 - The Pacific Northwest hosts largest chiton, the gumboot chiton (33 cm long),

(Mollusks continued) CHITONS



Mossy chiton
Mopalia muscosa



Hairy chiton
Mopalia ciliata

CHITONS



Woody chiton
Mopalia lignosa

Lined chiton
Tonicella lineata

LIMPETS



Doug Stark photo

LIMPETS



L. digitalis
Mary Jo Adams

L. pelta
Doug Stark

T. persona

T. scutum

Plate limpet
Tectura scutum



Mask limpet (inflated limpet)

Tectura persona

LIMPETS



Mary Jo Adams

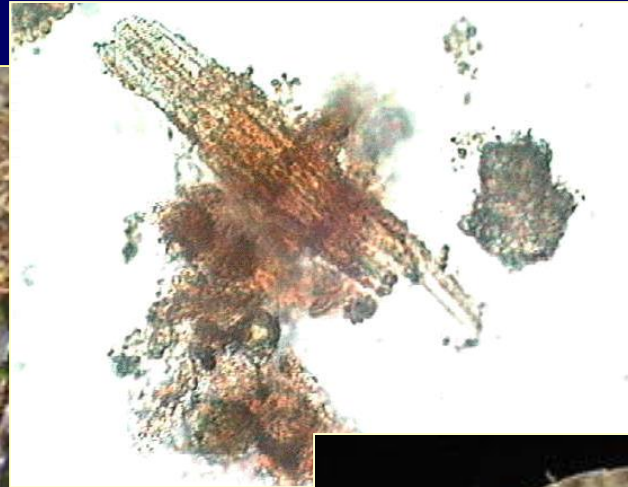
Eelgrass limpet
Lottia alveus paralella

PHYLUM: ARTHROPODS,
Subphylum: CRUSTACEANS:
Classes: Isopods, Amphipods, Arachnids



Jim Ramaglia photo

AMPHIPODS,



Detritus



Amphipod - "Sand flea"

Doug Stark photo

ISOPODS



Rockweed isopod
Idotea wosnesenskii



Mary Jo Adams

ISOPODS



Eelgrass Isopods
Idotea resecata



Skeleton shrimp
amphipod

Caprella sp.

PHYLUM ARTHROPODA,
SUBPHYLUM CRUSTACEA:
CRABS AND SHRIMPS

CRABS AND SHRIMPS



Purple shore crab
Hemigrapsus nudus

Hairy shore crab
Hemigrapsus oregonensis

Mary Jo Adams



Mary Jo Adams photos

European green crab
Cancer maenus



Mary Jo Adams

Black-clawed crab
Lophopanopeus bellus

CRABS AND SHRIMPS



Red rock crab
Cancer productus

in Sargassum
Sargassum muticum

Cancer productus

Color varies but is often brick red

Black tipped claws

Wide "fan" shaped carapace



Doug Stark photo

Red rock crab
Cancer productus



CRABS AND SHRIMPS

Graceful cancer crab

Cancer gracilis

CRABS AND SHRIMPS



Doug Stark

Dungeness Crab

CRABS and SHRIMPS



Hairy hermit crab



Grainy hand
hermit crab



Doug Stark photo

Decorator crab
Oregonia gracilis

CRABS AND SHRIMPS



broken back shrimp
Heptacarpus sp.

ECHINODERMS



Mary Jo Adams



Brooding star / six-ray star
Leptasterias hexactis



ECHINODERMS

Mottled sea star
Evasterias troschelii

ECHINODERMS



“Oh my
gracious! It’s
Pisaster
ochraceous!”

Purple sea stars
Pisaster ochraceus

Doug Stark photo

ECHINODERMS

Giant pink seastar
Pisaster brevispinus



ECHINODERMS



Giant pink seastar
Pisaster brevispinus



Doug Stark

Blood star
Henricia sp.



Sunflower star
Pycnopodia helianthoides



ECHINODERMS

Baby Sunflower Star

ECHINODERMS



Sun star &

Solaster stimpsoni

ECHINODERMS



Leather star *Dermasterias imbricata*



ECHINODERMS

Mottled Sea Stars
and
1 Sunflower Star

*Evasterias
troschellii*

and
*Pycnopodia
helianthoides*



Annie Prevost

ECHINODERMS

Daisy brittle star
Ophiopholis aculeata

ECHINODERMS



Long armed brittle star
Amphiodia occidentalis

Mary Jo Adams

ECHINODERMS



Beach Naturalists

Eccentric Sand Dollar
Dendraster excentricus

ECHINODERMS

Sand Dollar Bed – *sfsu photo*



ECHINODERMS



Green Sea Urchin
Strongylocentrotus droebachiensis

Nancy Bergman photos



Doug Stark photo

ECHINODERMS

Orange sea cucumber
Cucumaria miniata