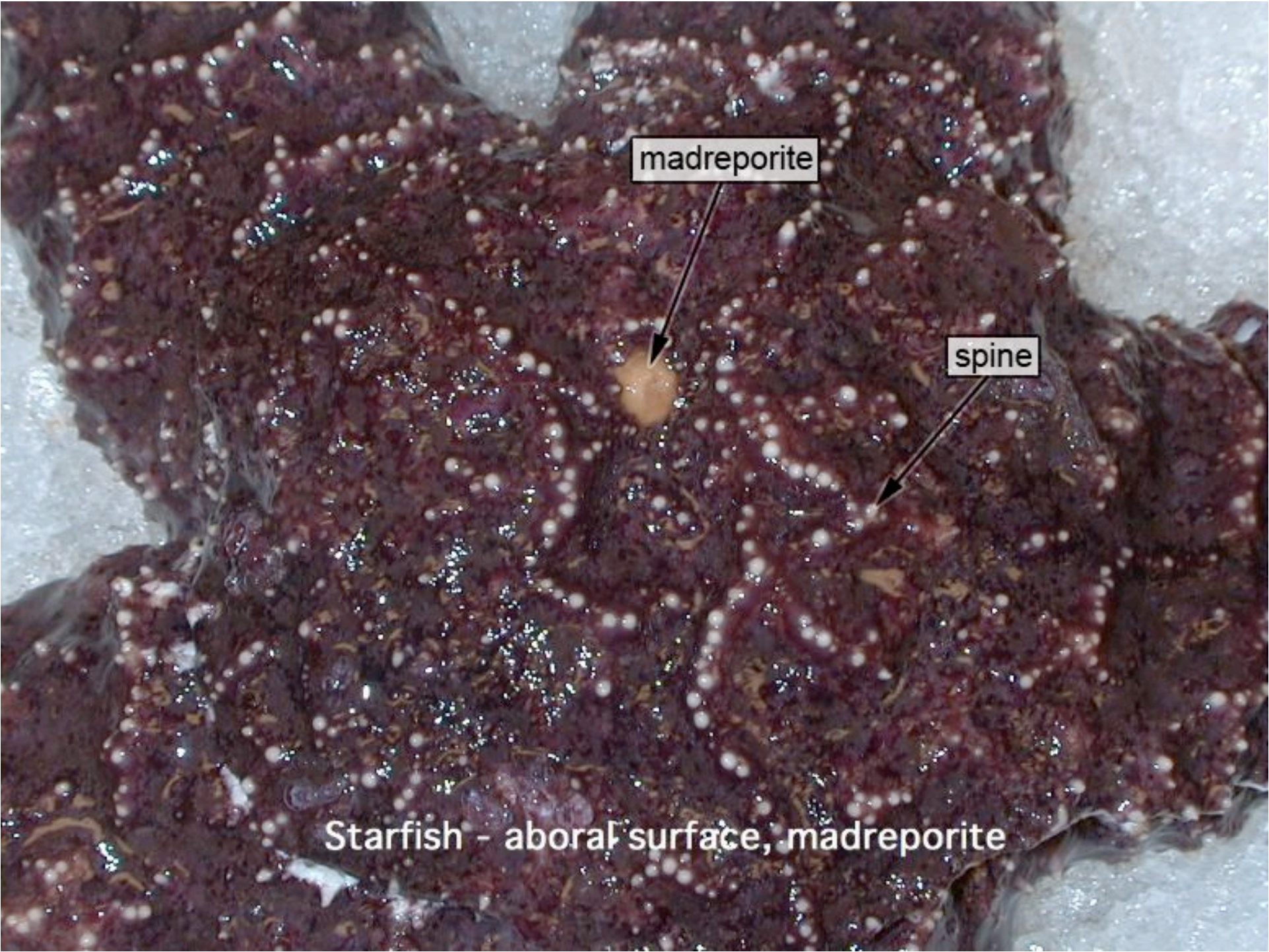


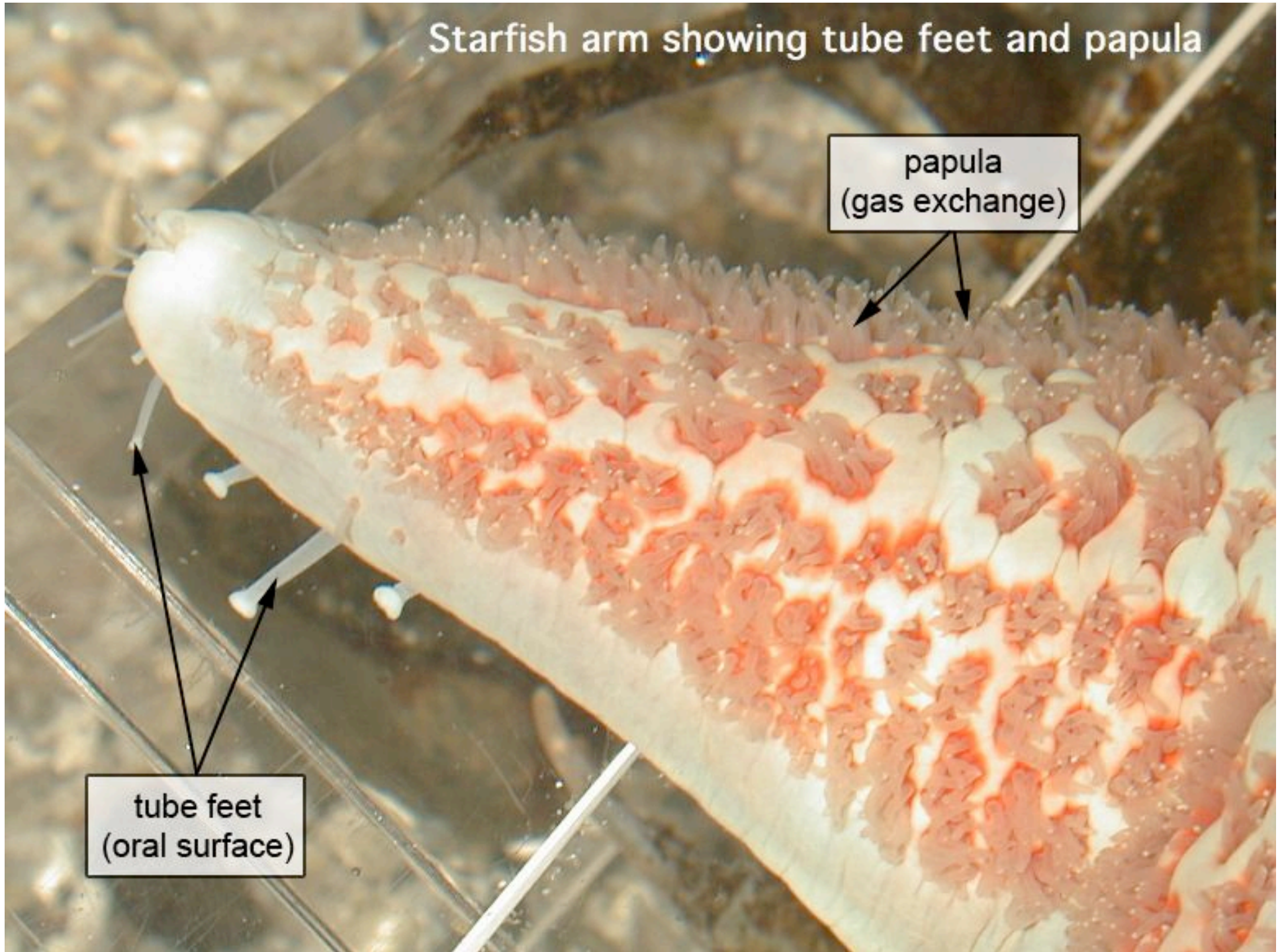
madreporite

spine

Starfish - aboral surface, madreporite



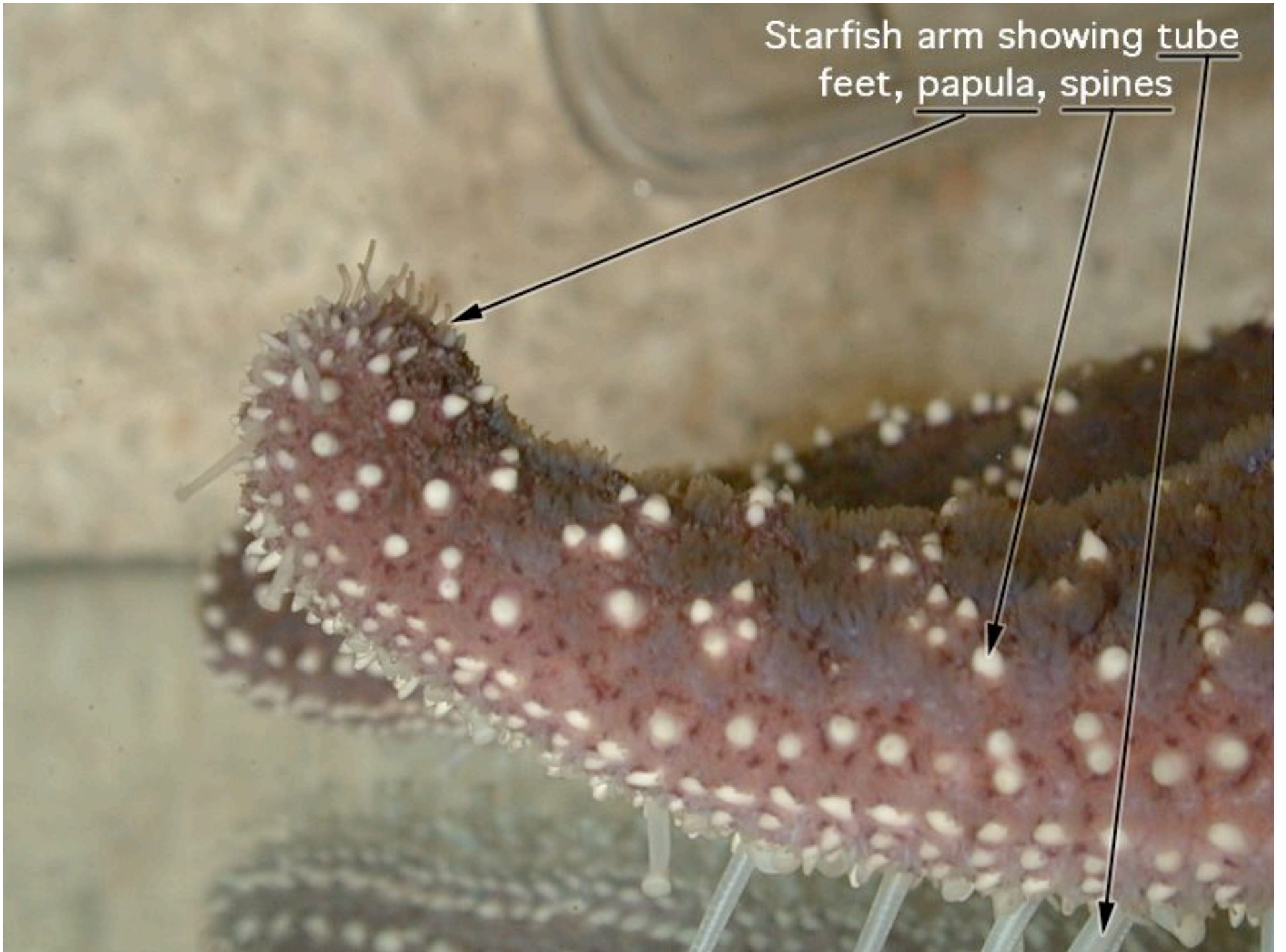
Starfish arm showing tube feet and papula



papula
(gas exchange)

tube feet
(oral surface)

Starfish arm showing tube
feet, papula, spines



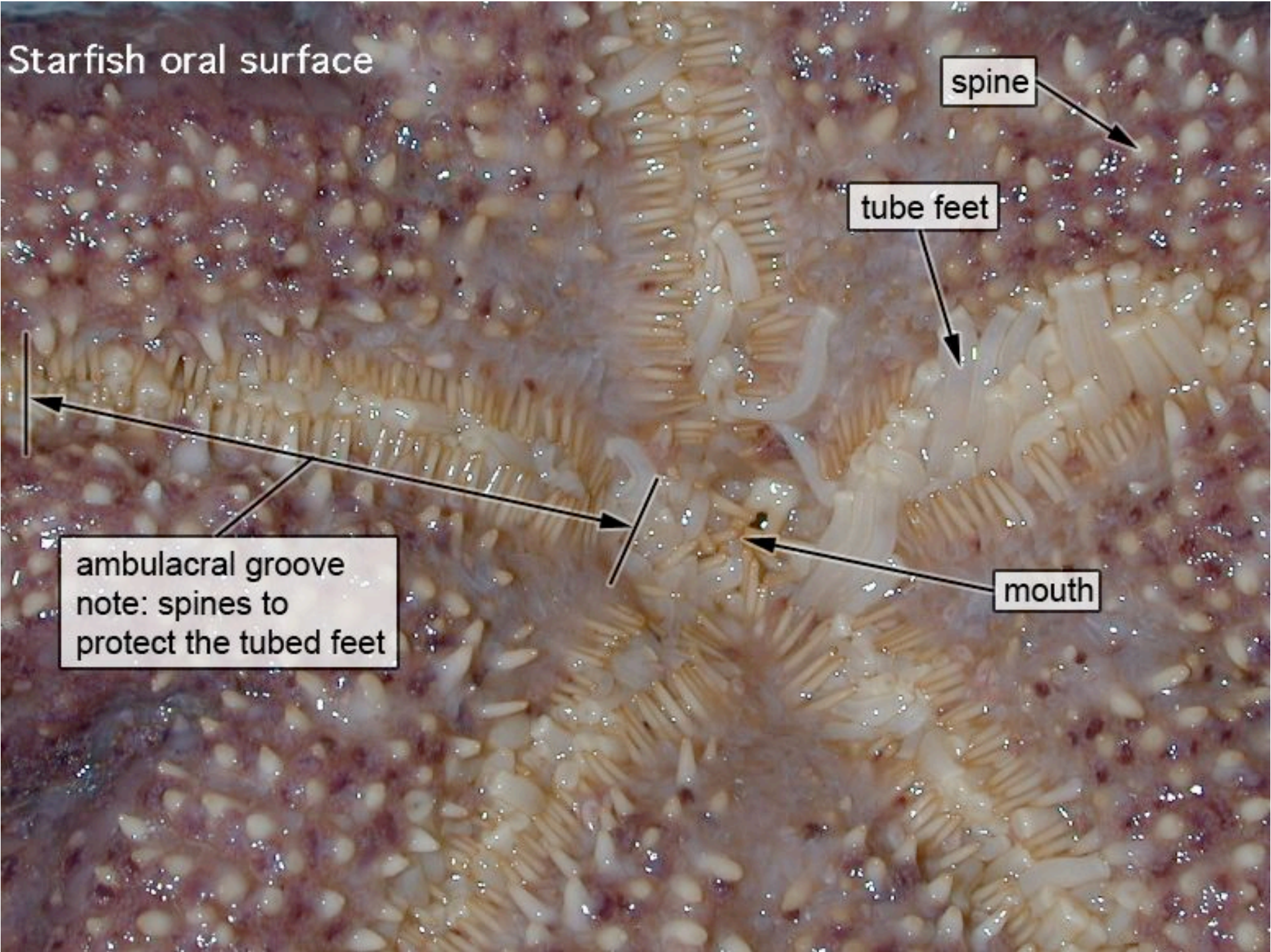
Starfish oral surface

spine

tube feet

mouth

ambulacral groove
note: spines to
protect the tubed feet

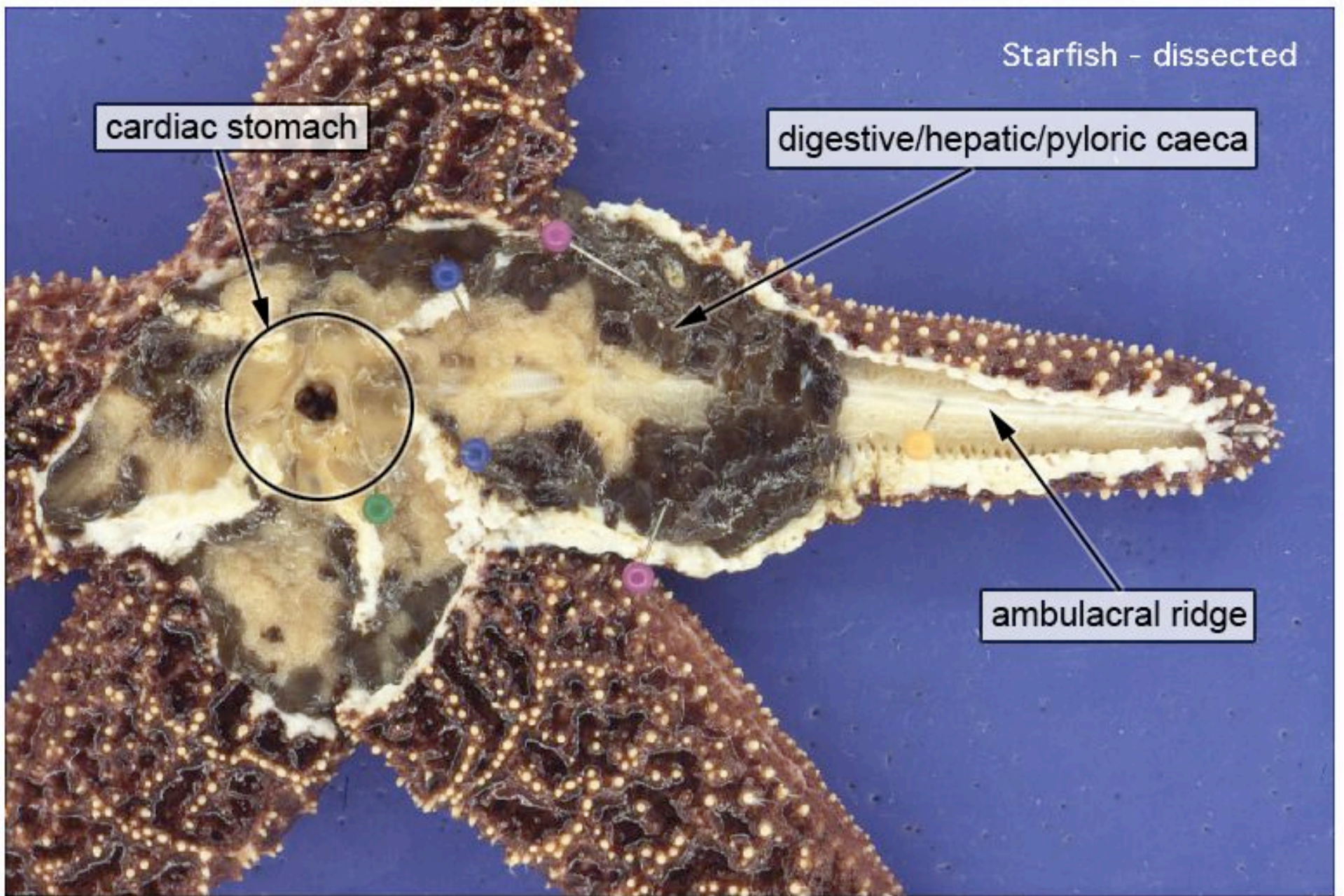


Starfish - dissected

cardiac stomach

digestive/hepatic/pyloric caeca

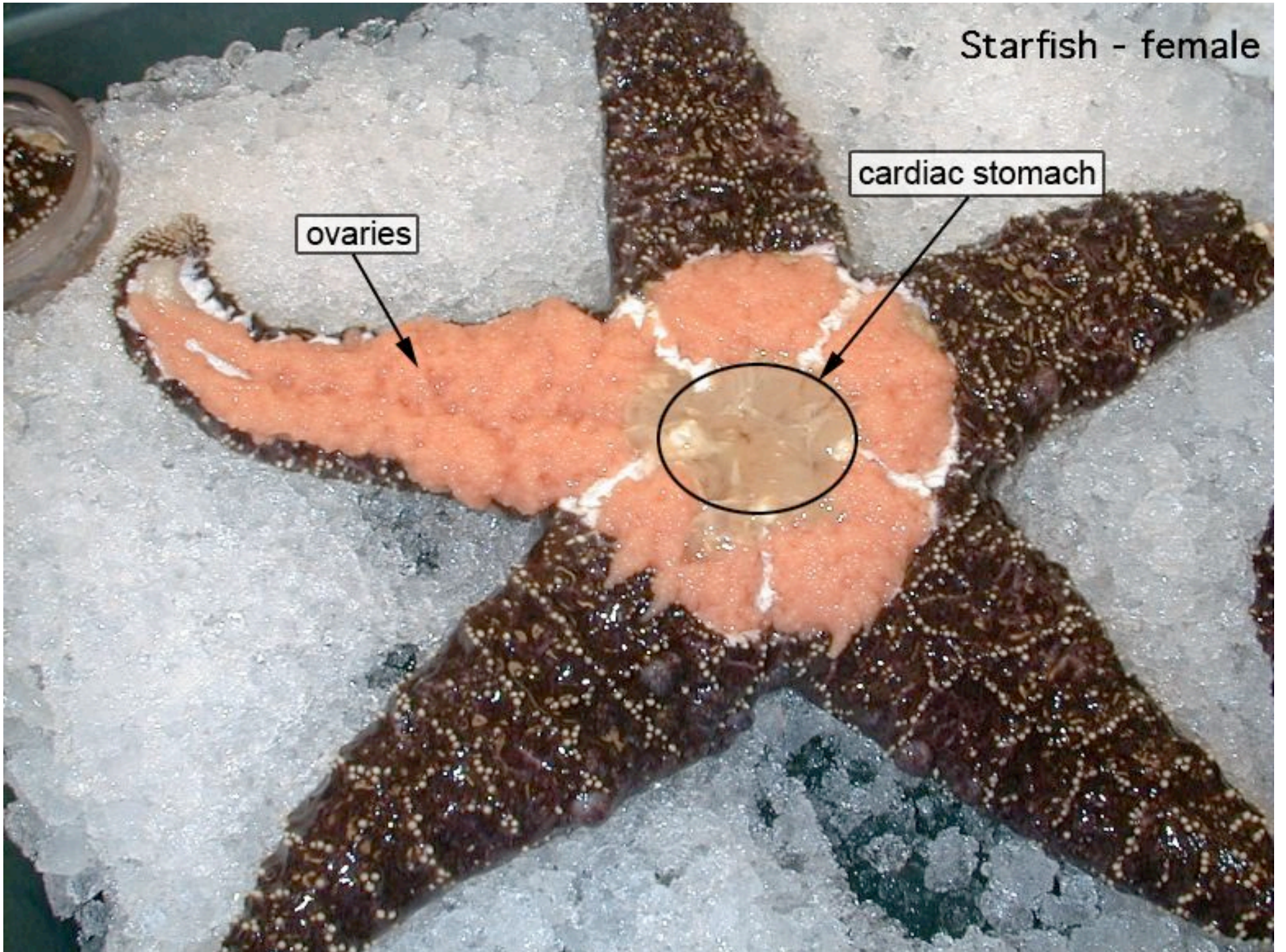
ambulacral ridge



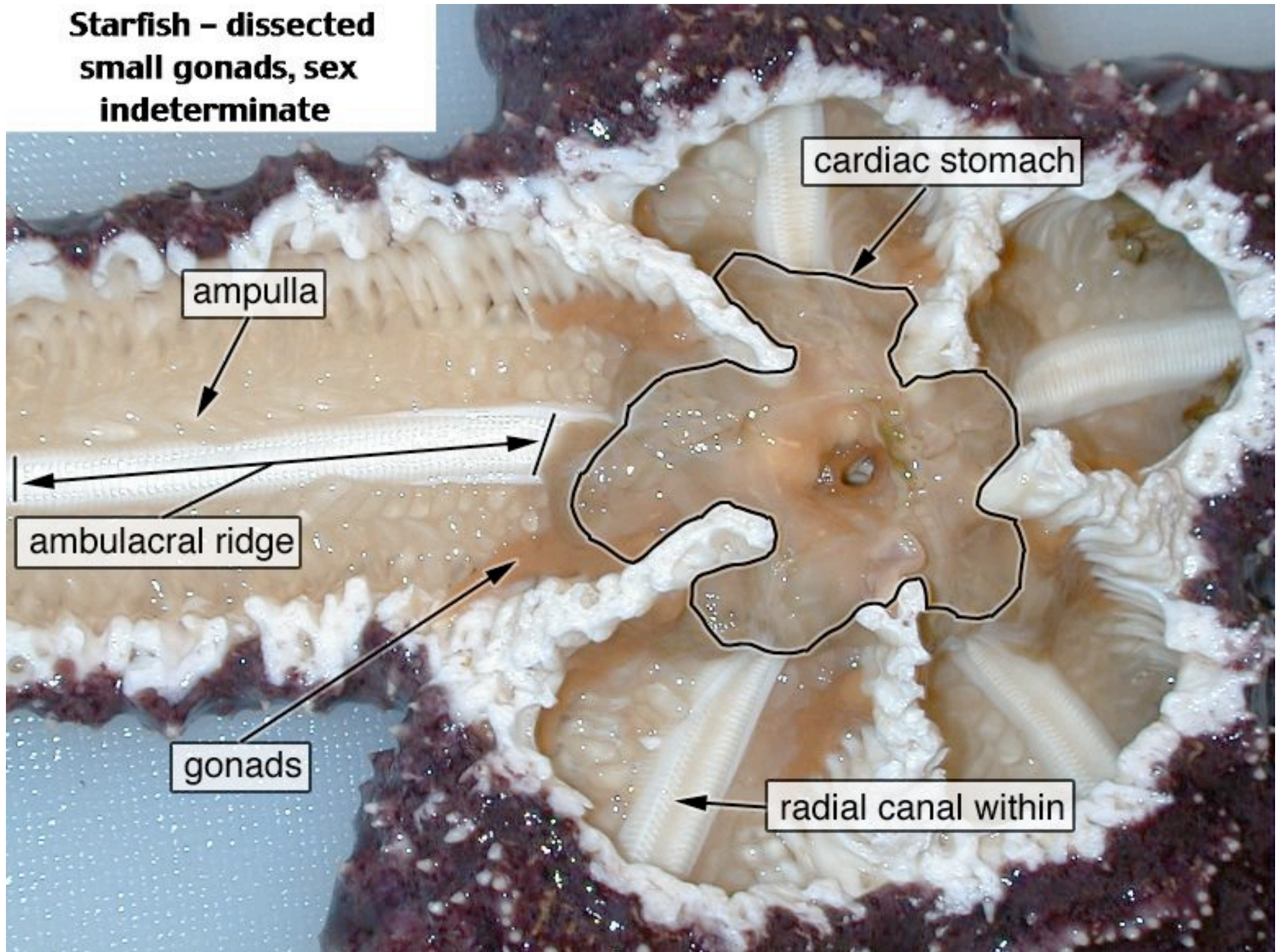
Starfish - female

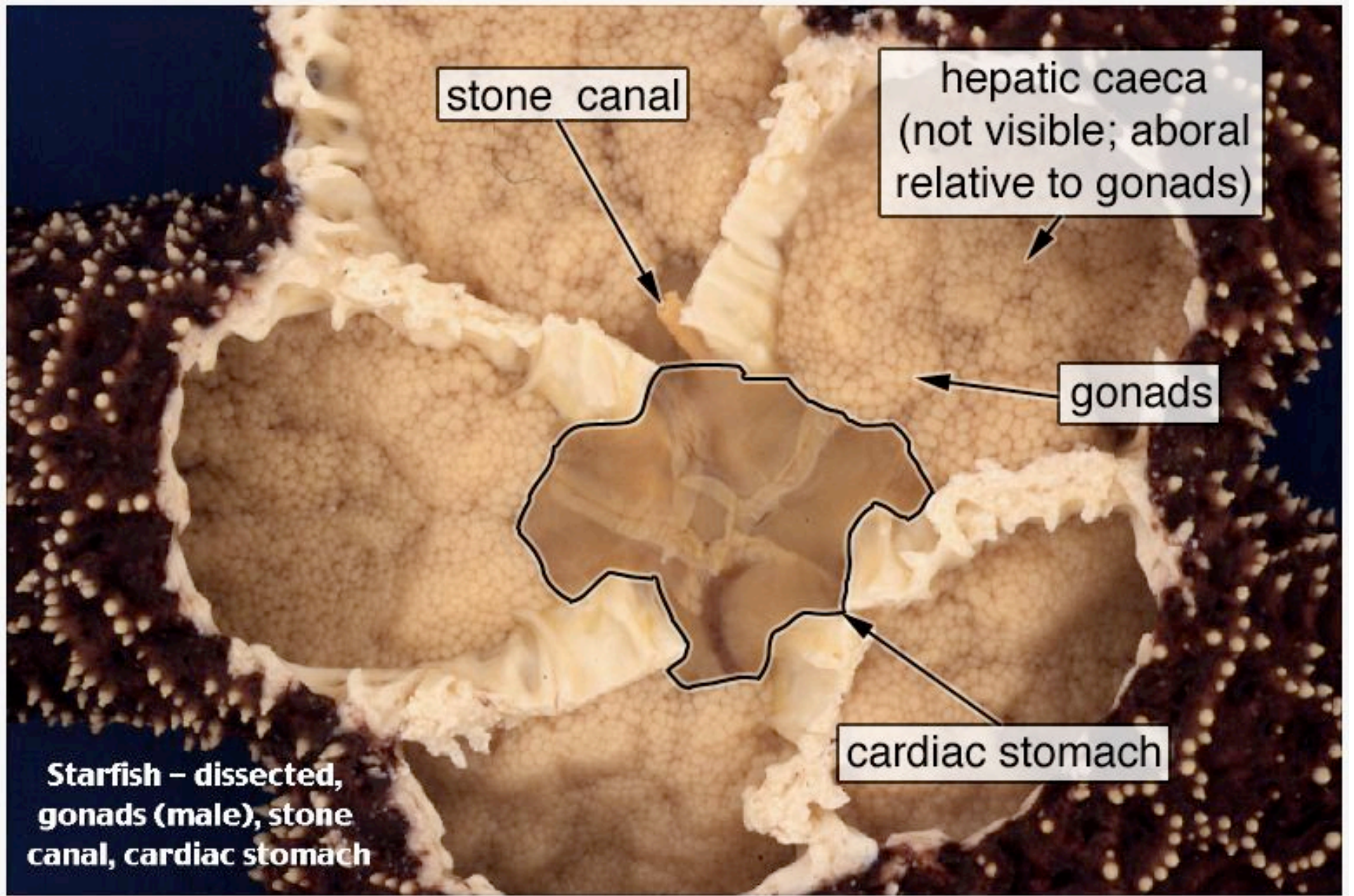
ovaries

cardiac stomach

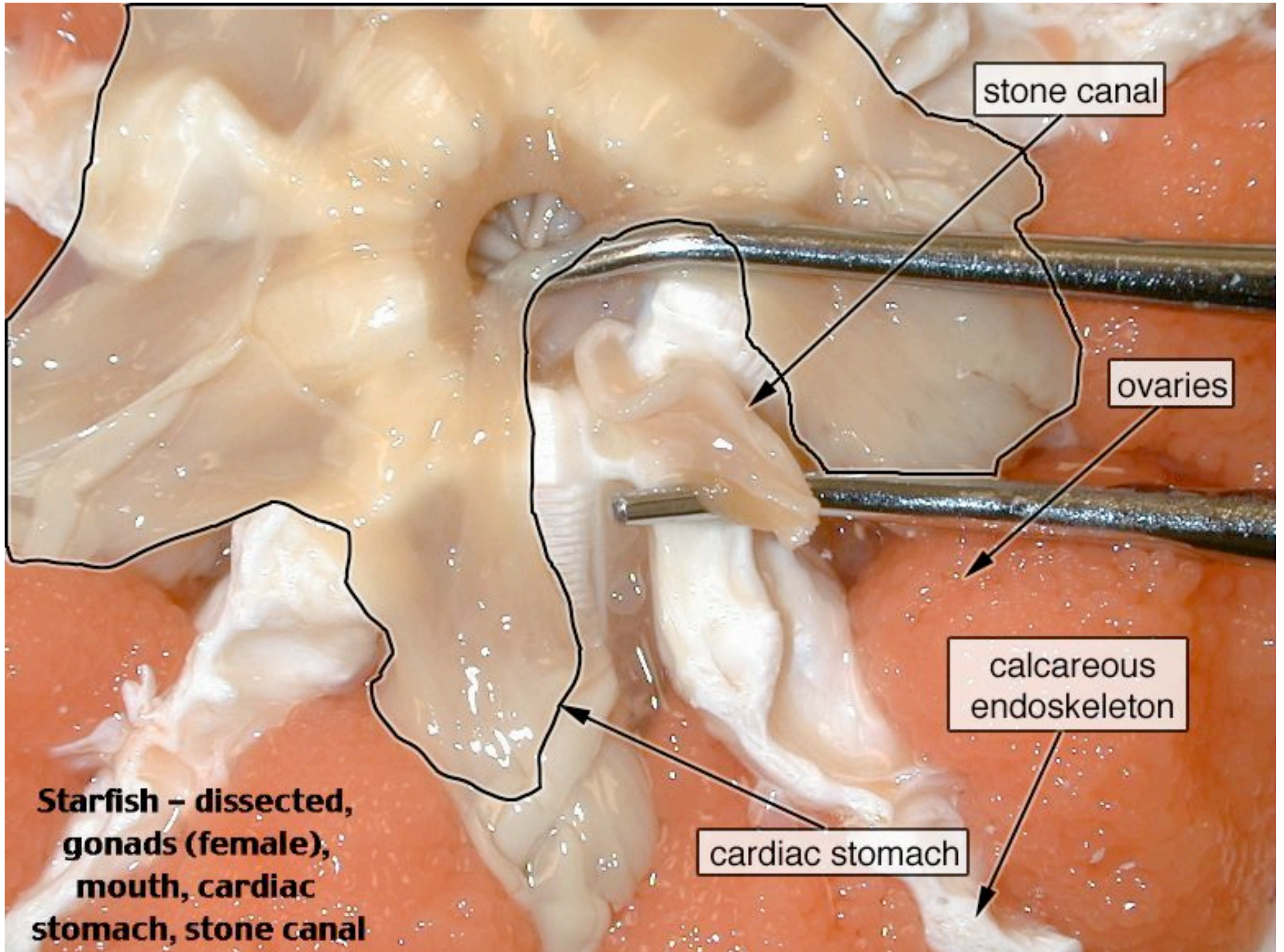


**Starfish - dissected
small gonads, sex
indeterminate**





**Starfish – dissected,
gonads (male), stone
canal, cardiac stomach**



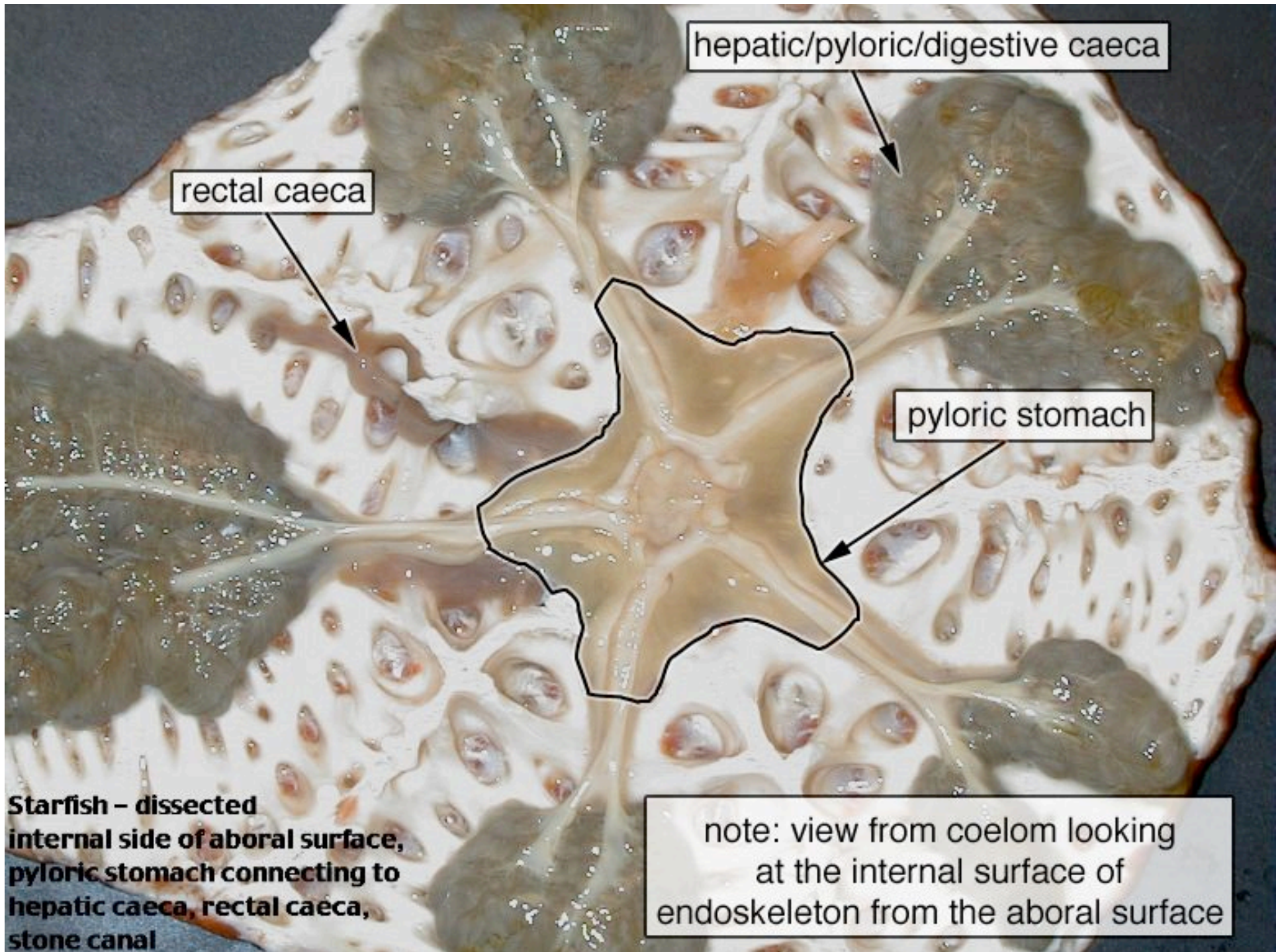
stone canal

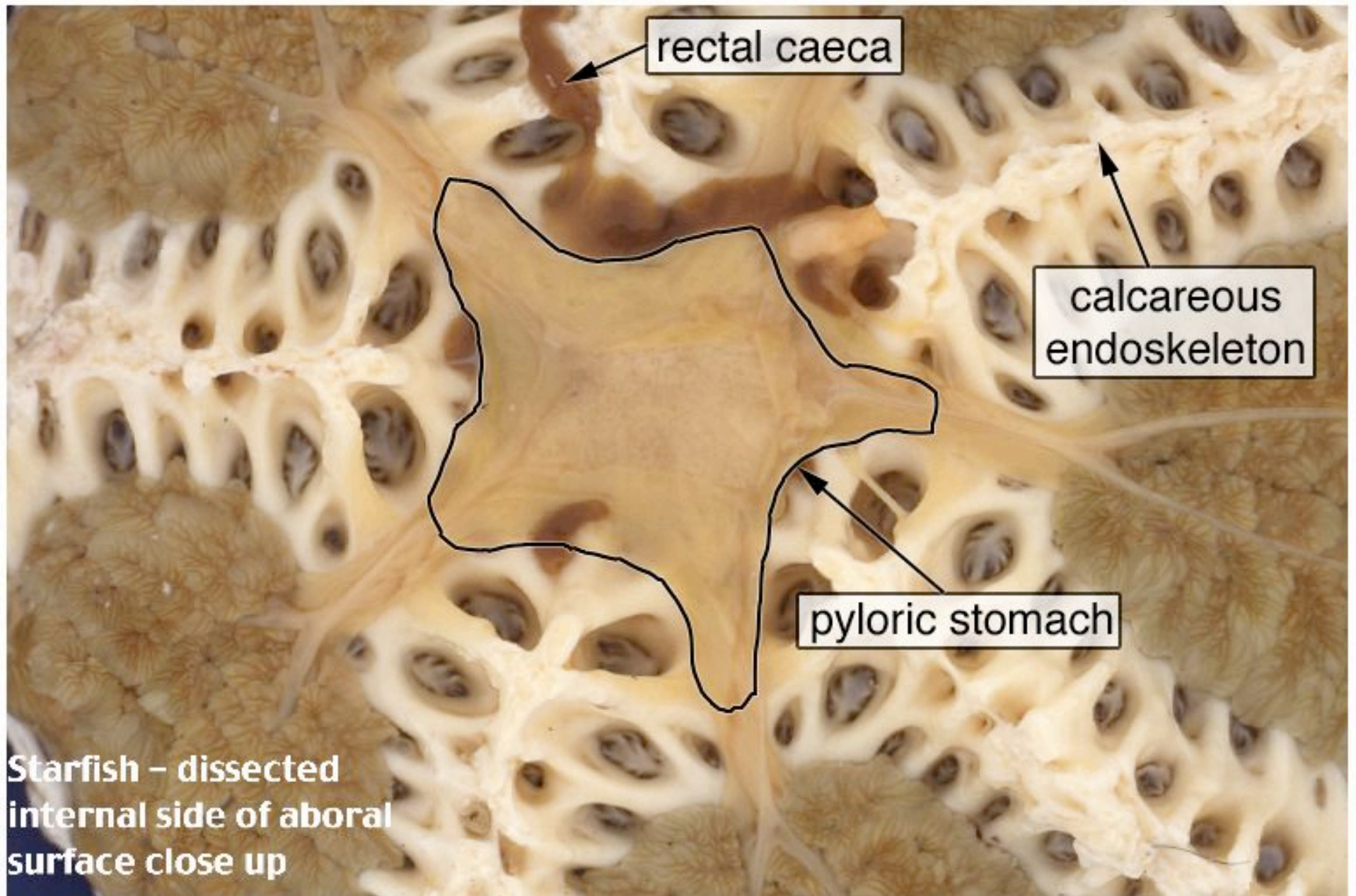
ovaries

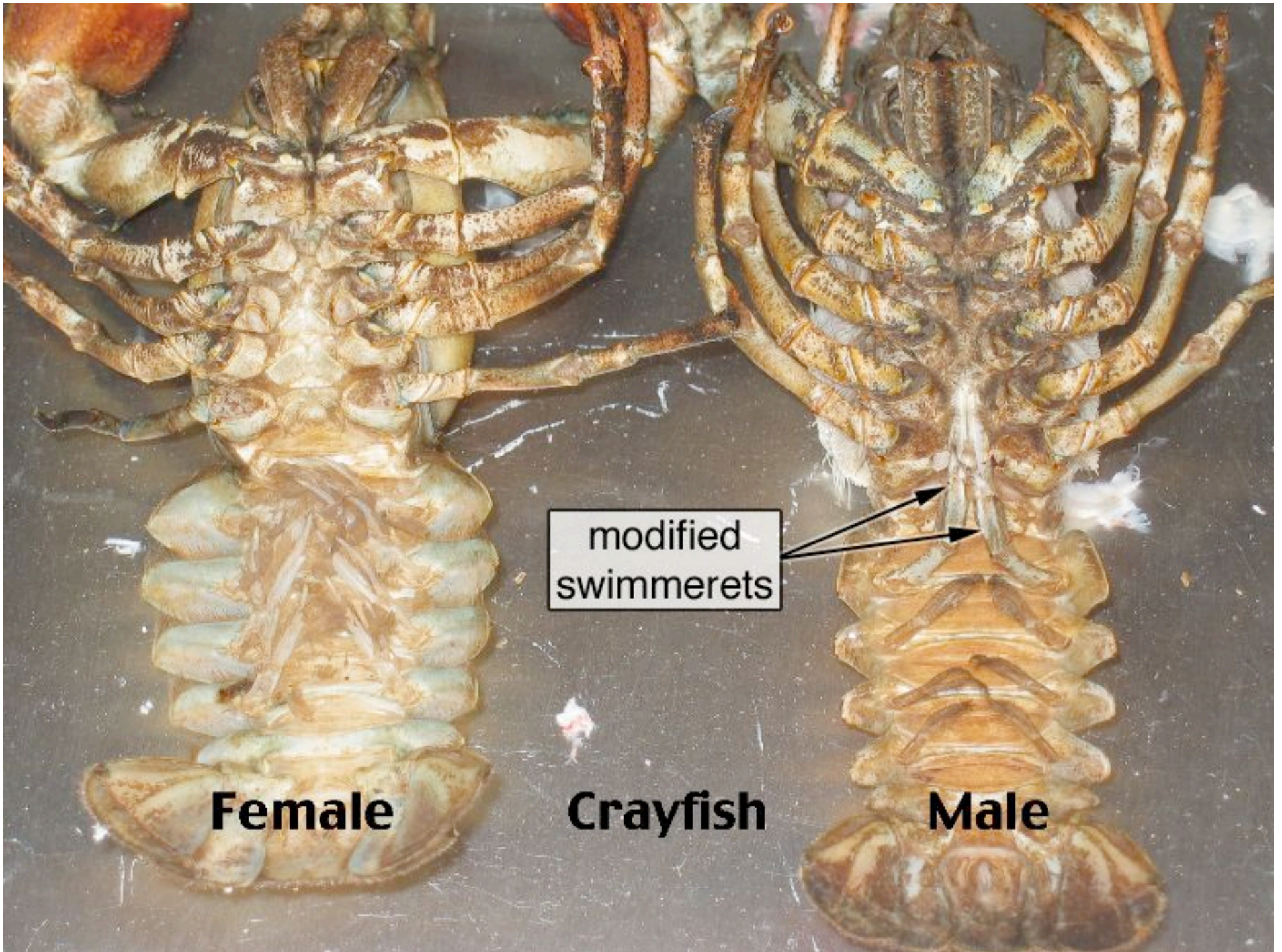
calcareous endoskeleton

cardiac stomach

Starfish – dissected, gonads (female), mouth, cardiac stomach, stone canal







Female

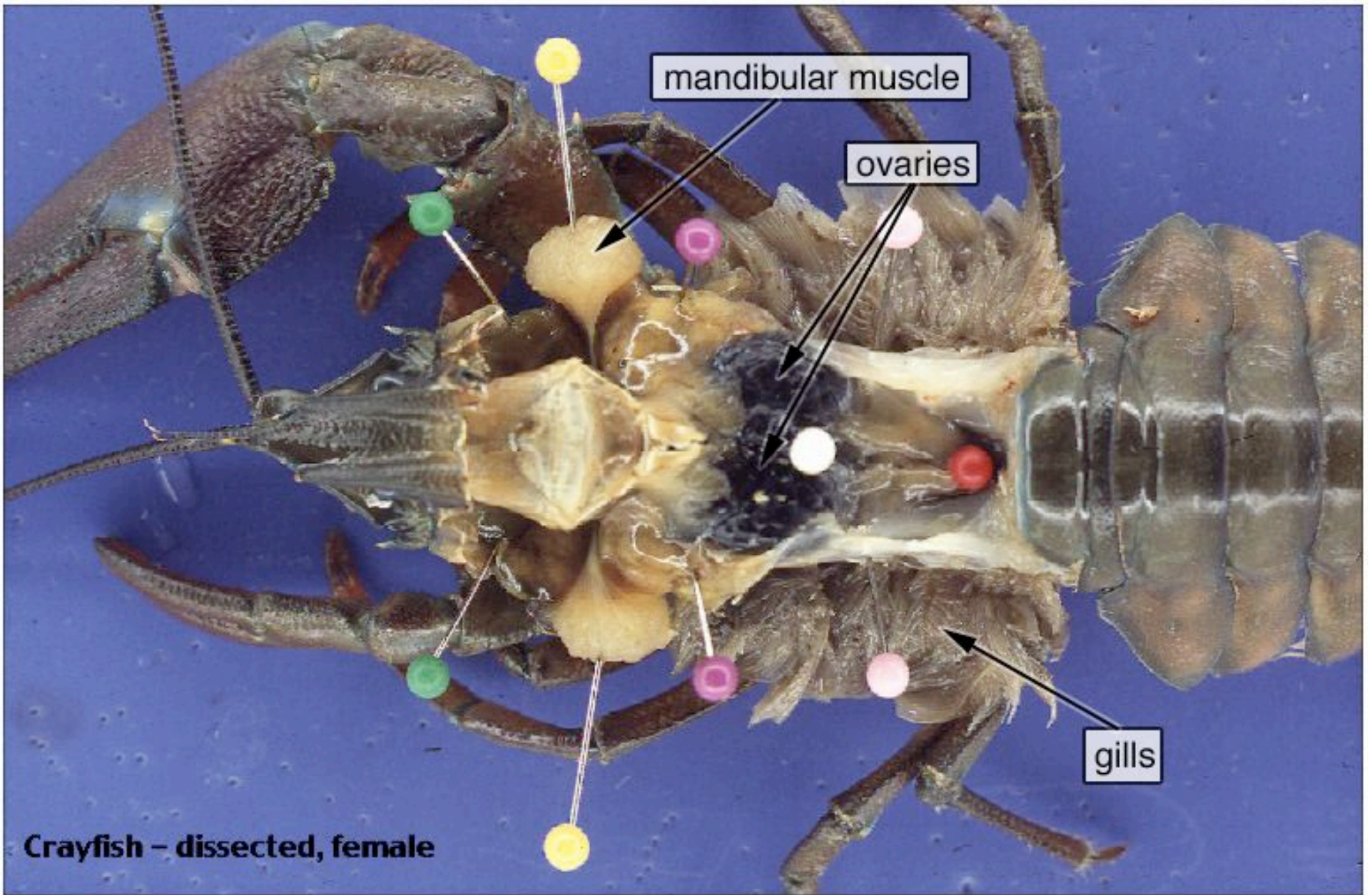
modified
swimmerets

Crayfish

Male

Crayfish –side view, carapace removed from gills



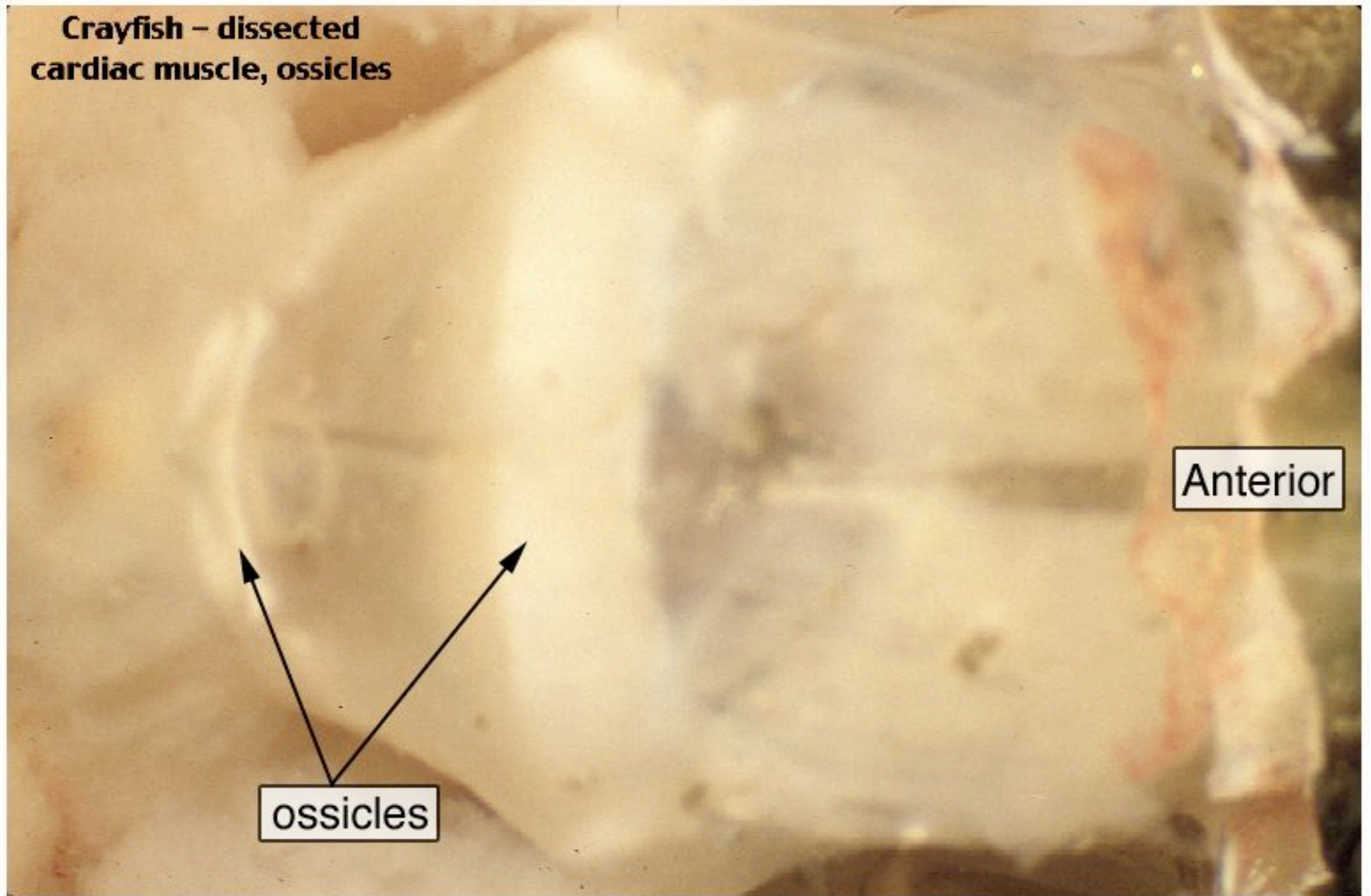


Crayfish – dissected, female

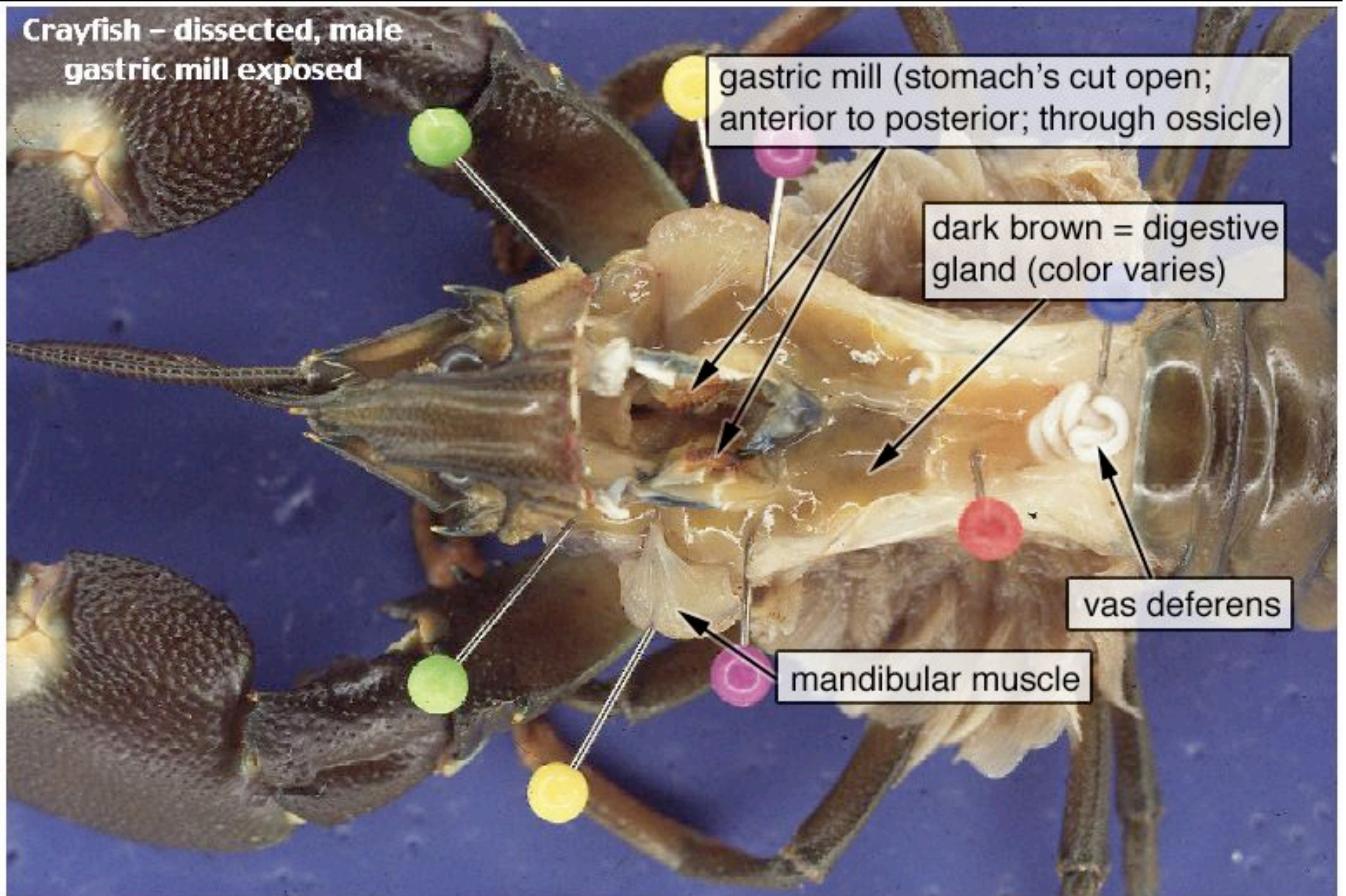
**Crayfish – dissected
cardiac muscle, ossicles**

Anterior

ossicles



**Crayfish – dissected, male
gastric mill exposed**



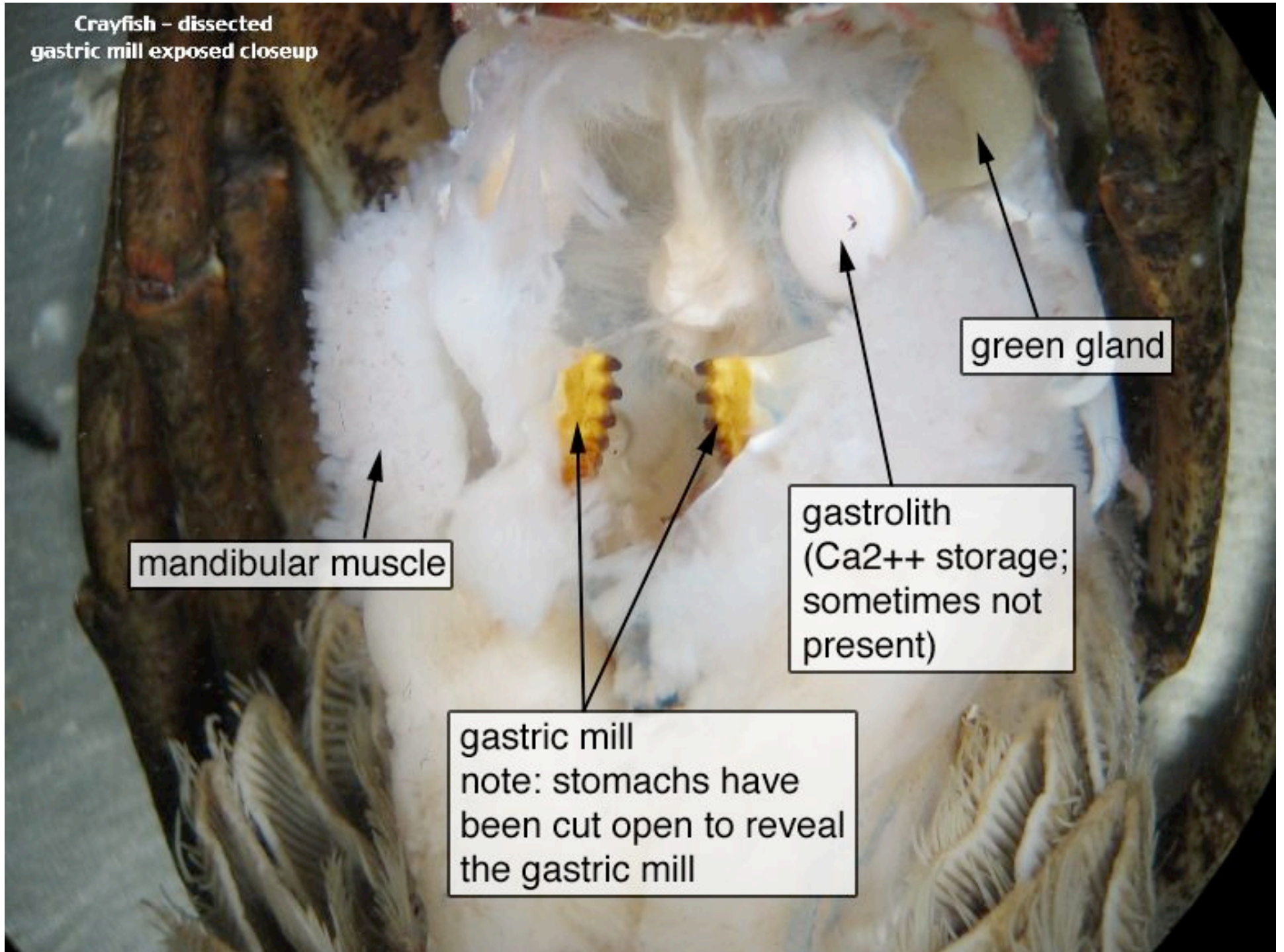
gastric mill (stomach's cut open;
anterior to posterior; through ossicle)

dark brown = digestive
gland (color varies)

vas deferens

mandibular muscle

Crayfish - dissected
gastric mill exposed closeup

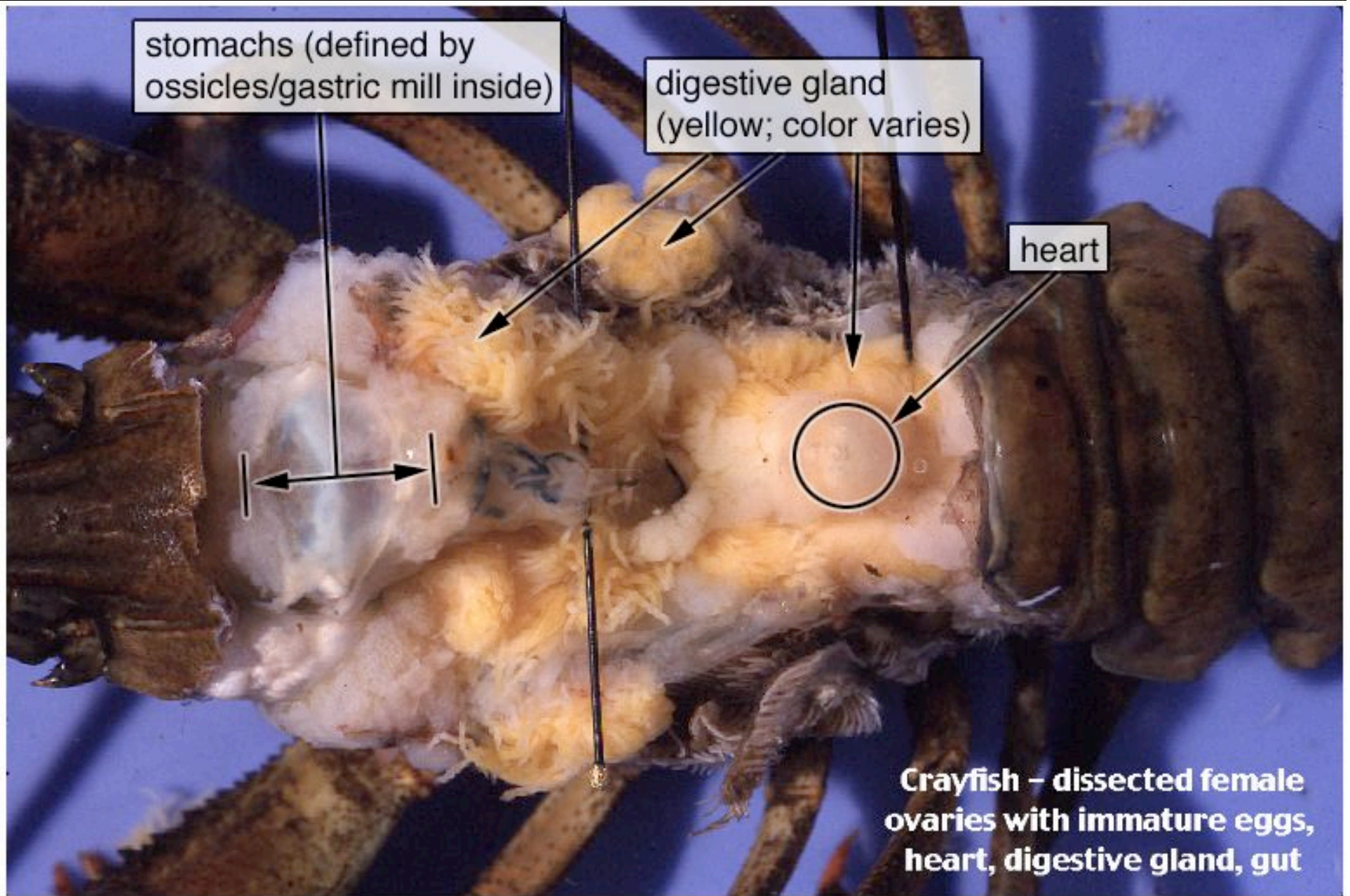


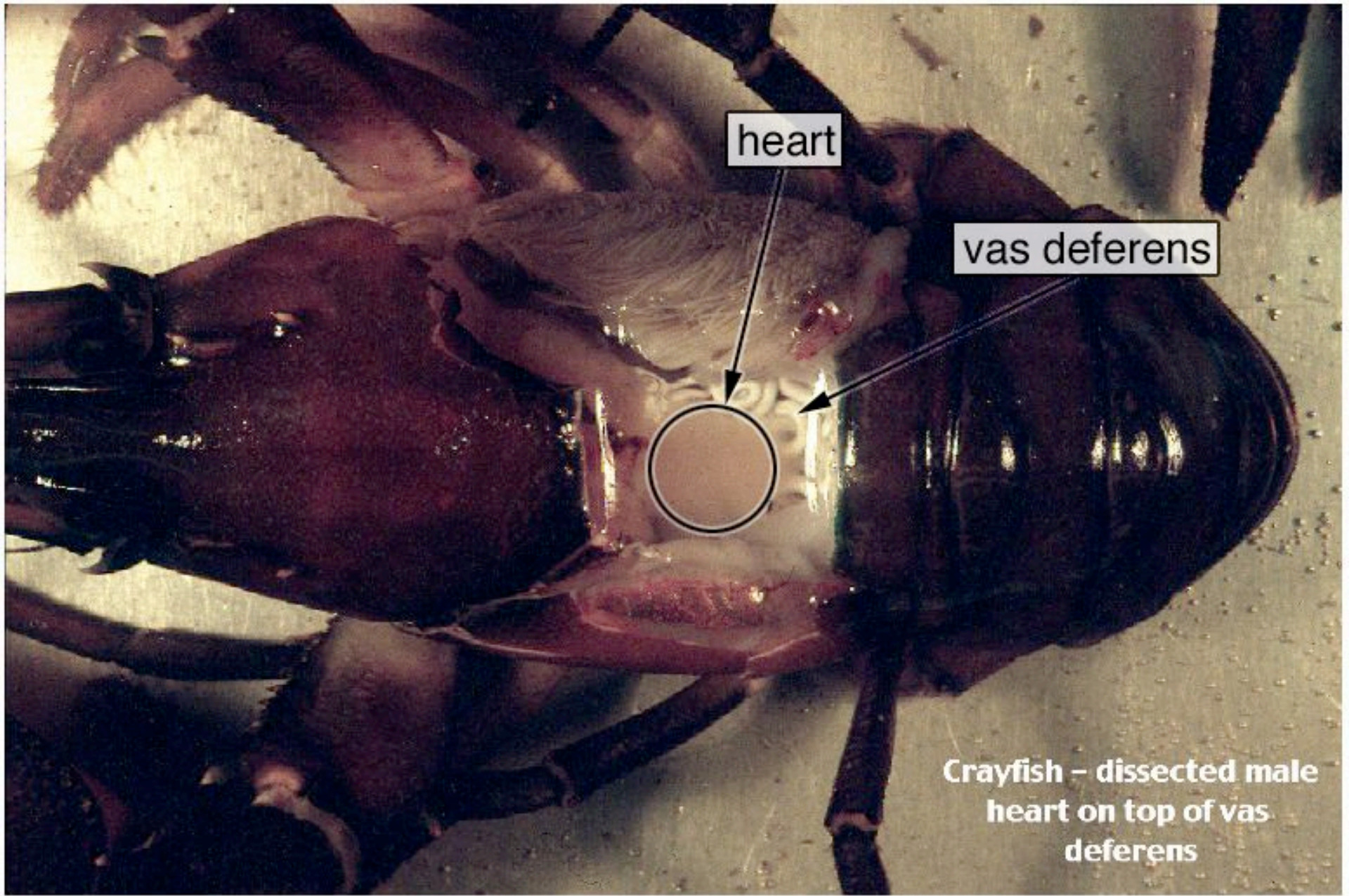
mandibular muscle

green gland

gastrolith
(Ca²⁺ storage;
sometimes not
present)

gastric mill
note: stomachs have
been cut open to reveal
the gastric mill

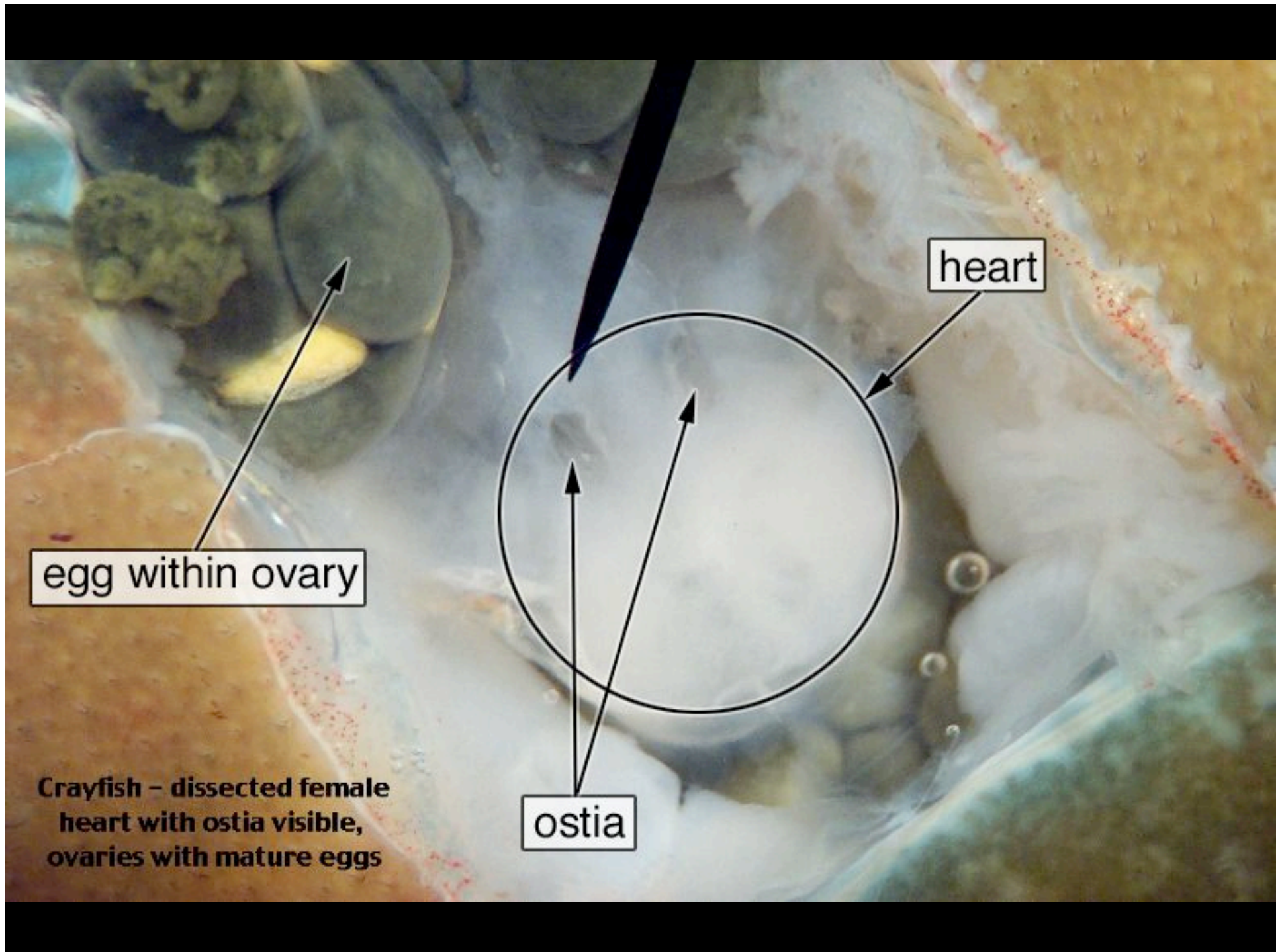




heart

vas deferens

**Crayfish – dissected male
heart on top of vas
deferens**



egg within ovary

heart

ostia

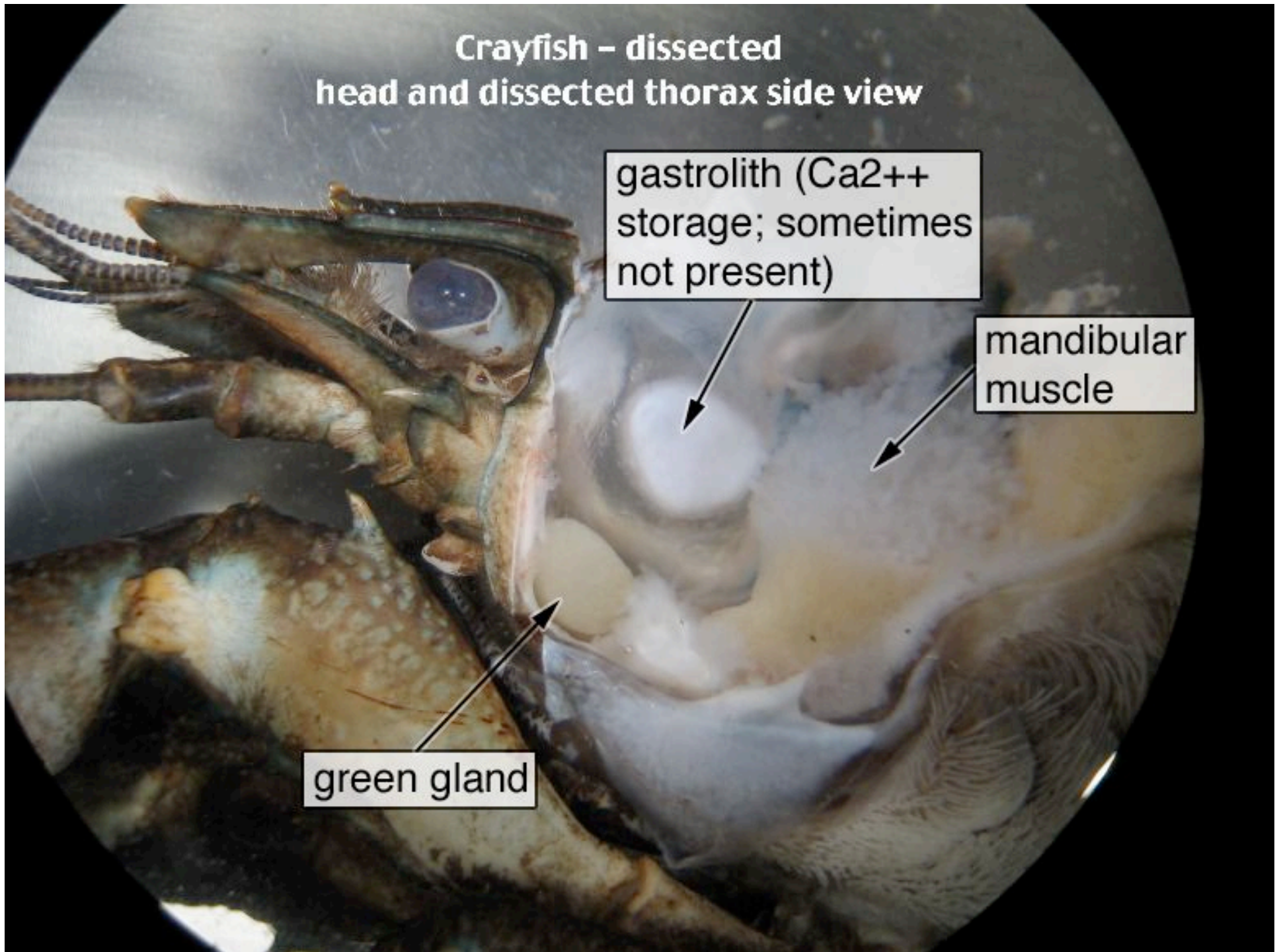
**Crayfish - dissected female
heart with ostia visible,
ovaries with mature eggs**

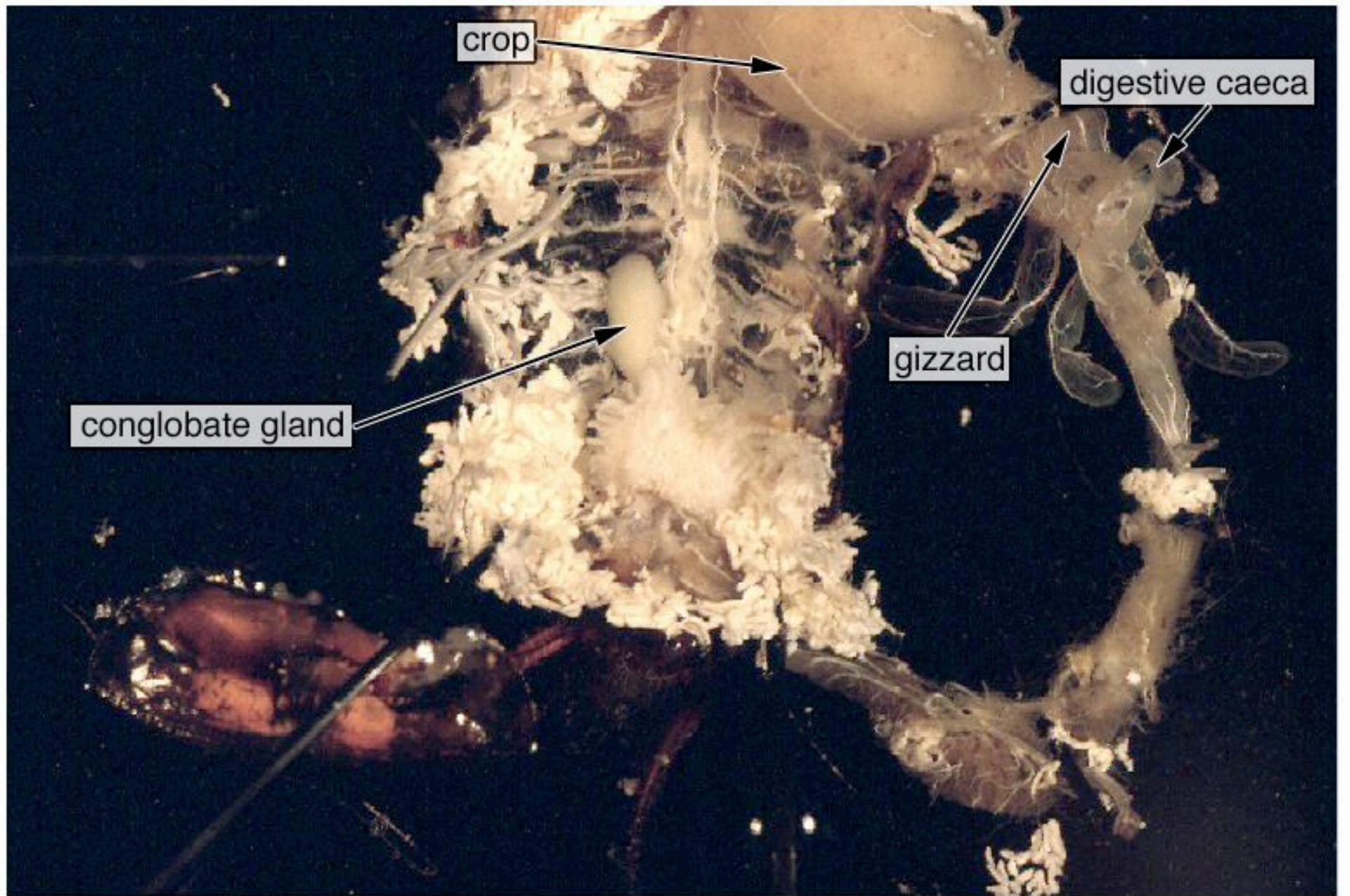
**Crayfish – dissected
head and dissected thorax side view**

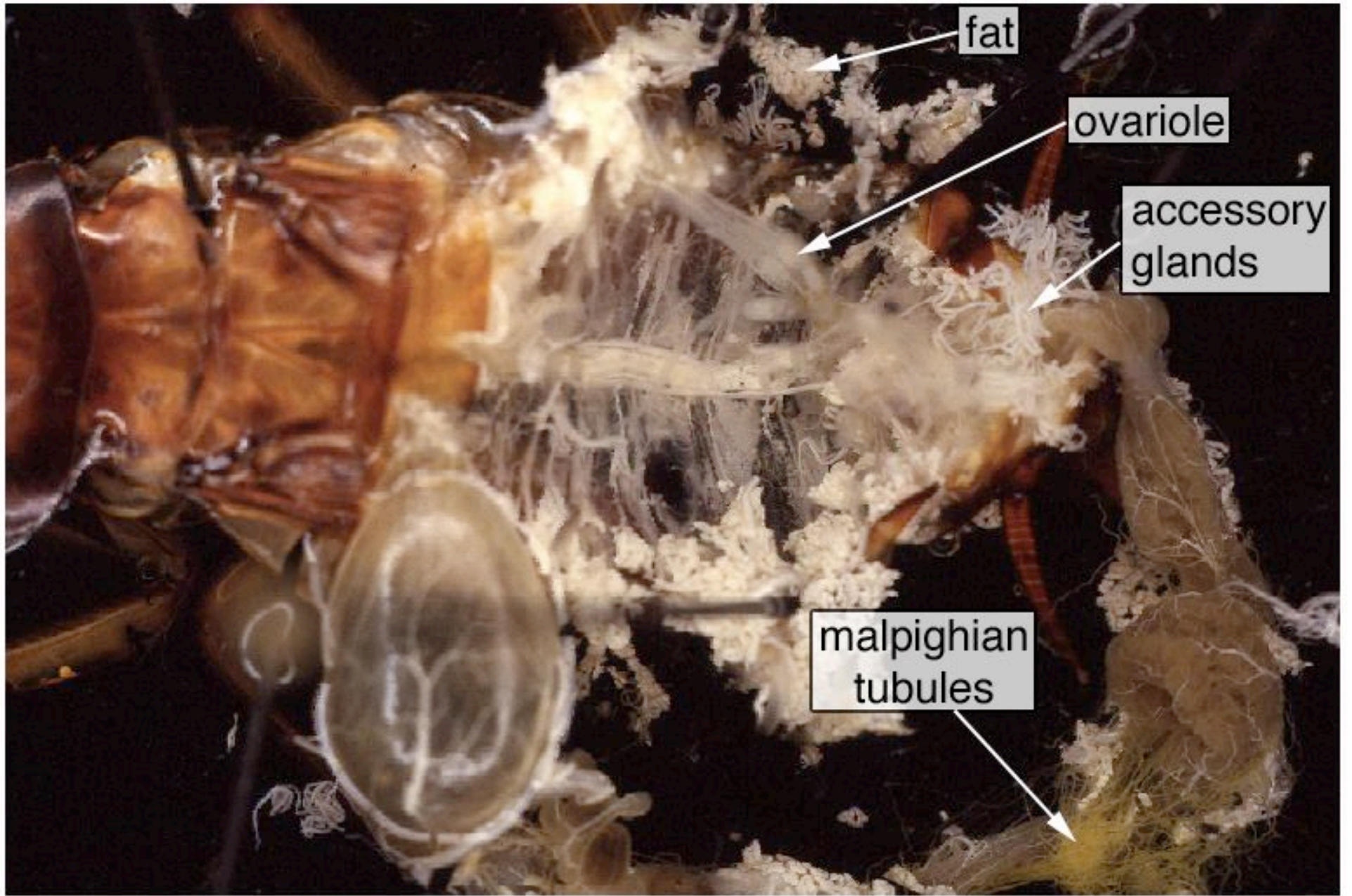
gastrolith (Ca^{2+}
storage; sometimes
not present)

mandibular
muscle

green gland







fat

ovariole

accessory glands

malpighian tubules