

## ANNEX XIX

### Maturity stages scale for oviparous sharks **females** applied to *Galeus melastomus*

<b>Ovarian Stage</b>	<b>Definition</b>	<b>Description</b>
<b>A or 1</b>	<b>immature, juvenile</b>	Ovaries small, their internal structure gelatinous or granulated. No oocytes differentiated or all uniformly small, granular. Oviducts (uteri) narrow, thread-like.  <i>(plate 1, fig. 1)</i>
<b>B or 2</b>	<b>maturing, adolescent,</b>	Ovaries somewhat enlarged, walls more transparent. Oocytes becoming differentiated to various small sizes. Uteri largely as stage A/1 but may become widened posteriorly.  <i>(plate 1, fig. 2 &amp; 3; plate 2, figs. 1 &amp; 2)</i>
<b>C or 3</b>	<b>mature, adult</b>	Ovaries large and tight. Oocytes enlarged, with some being very large. Uteri enlarged and widening over nearly their entire length.  <i>(plate 2, fig. 3; plate 3; plate 4, figs. 1 &amp; 2)</i>
<b>Uterine Stage</b>	<b>Definition</b>	<b>Description</b>
<b>D or 4</b>	<b>active</b>	A distinctly large yolk-egg present in one or both Fallopian tubes. No egg capsule yet visible in shell gland, or beginning formation of egg capsule at most.
<b>E or 5</b>	<b>advanced</b>	Large yolk-eggs in Fallopian tubes, or already passing through into egg capsules. Egg capsules about fully formed in one or both oviducts but still soft at upper end and located very close to Fallopian tubes.  <i>(plate 4, fig. 3; plate 5)</i>
<b>F or 6</b>	<b>extruding</b>	Completed, hardened egg capsules in one or both oviducts, more or less separated from Fallopian tube. Skate capsule surface mostly covered with dense silky fibres. Either no enlarged oocytes in Fallopian tubes, or one or two in position. If oviducts empty but still much enlarged and wide, capsules have probably just been extruded – this corresponds with either stage D/4 or E/5.  <i>(plate 6; plate 7; plate 8; plate 9; plate 10)</i>

Plate 1

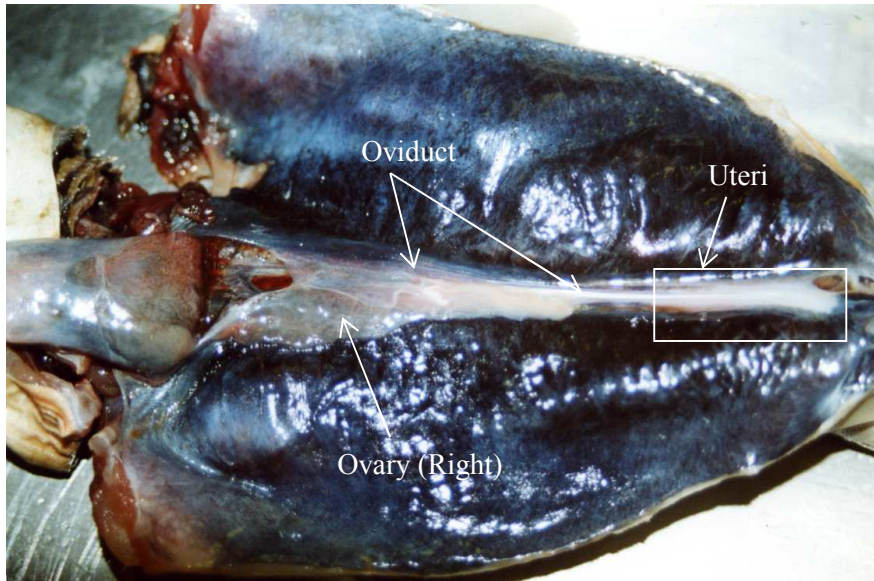


Figure 1:  
*Galeus melastomus*  
Female: stage A/1

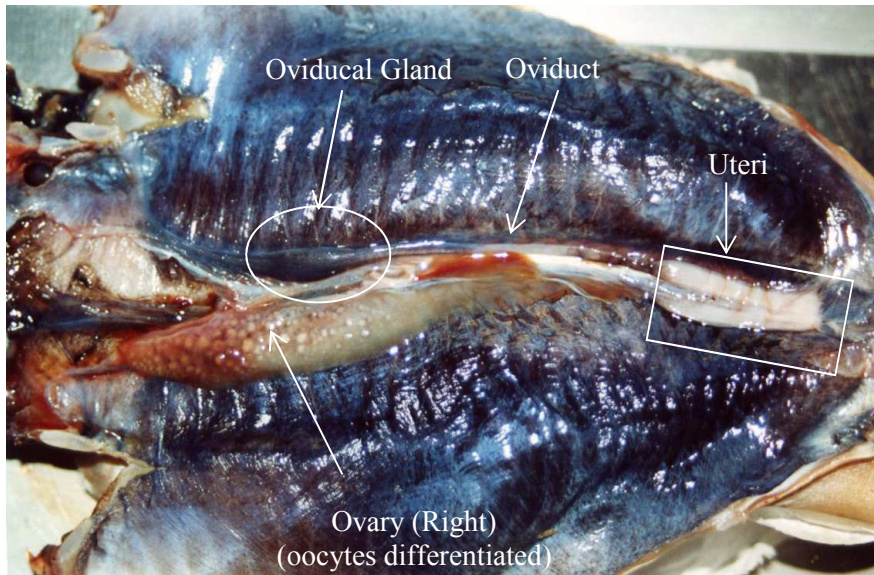


Figure 2:  
*Galeus melastomus*  
Female: stage B/2  
(initial stage)

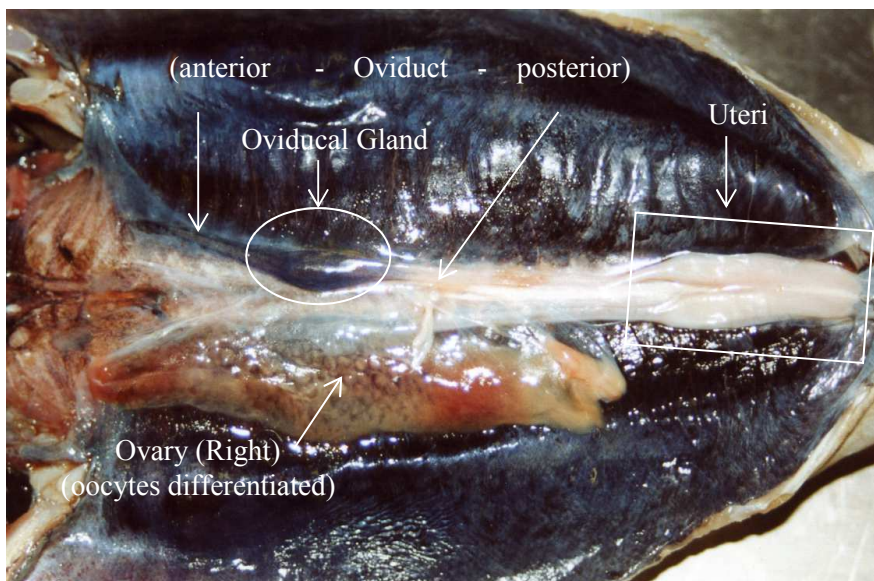


Figure 3:  
*Galeus melastomus*  
Female: stage B/2  
(intermediate stage)

**Plate 2**

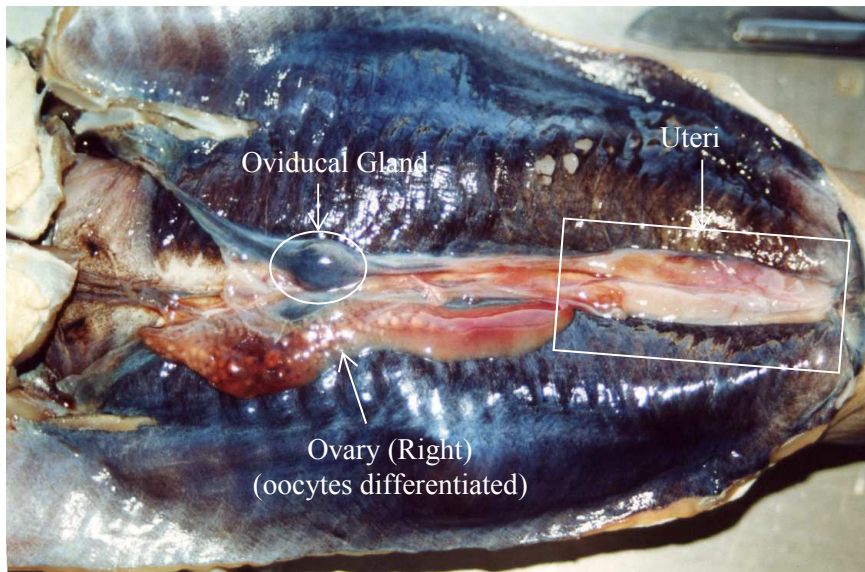


Figure 1:  
*Galeus melastomus*  
Female: stage B/2  
(advanced stage)

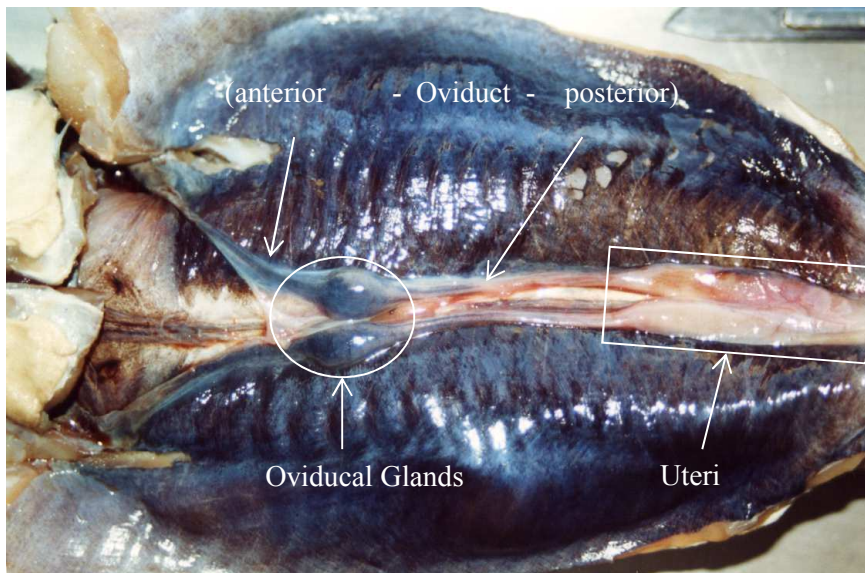


Figure 2:  
*Galeus melastomus*  
Female: stage B/2

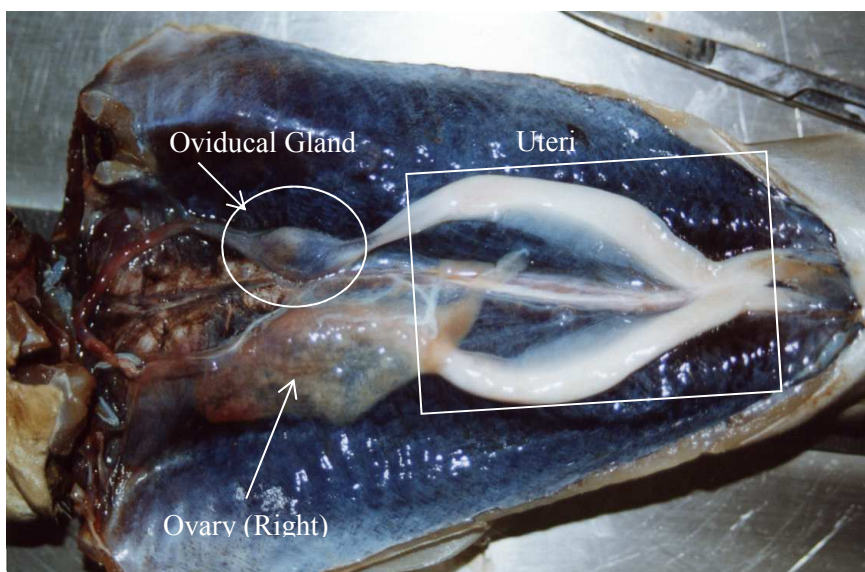


Figure 3:  
*Galeus melastomus*  
Female: stage C/3  
(initial stage)

Plate 3

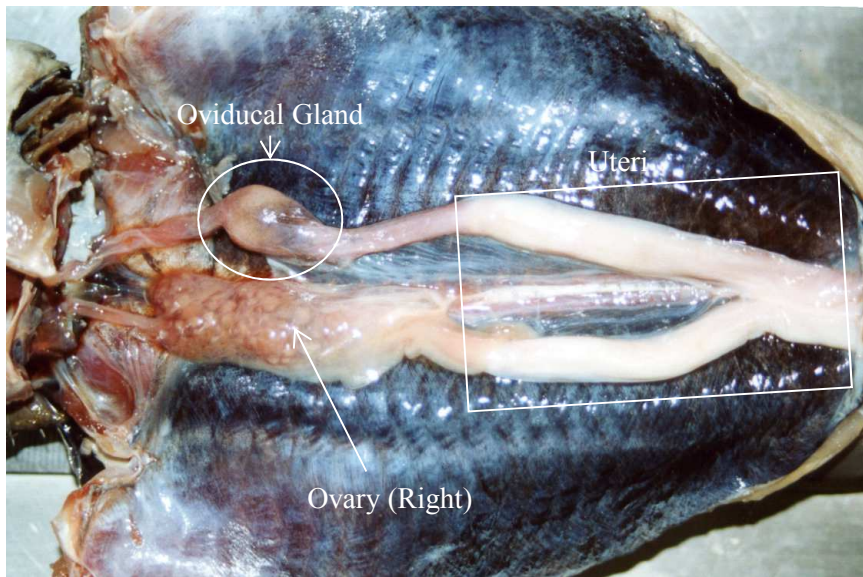


Figure 1:  
*Galeus melastomus*  
Female: stage C/3  
(intermediate stage)

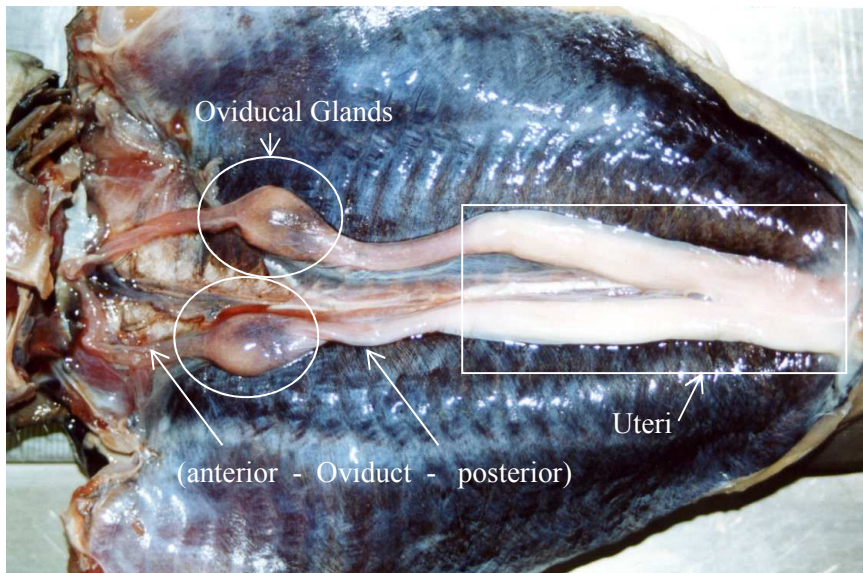


Figure 2:  
*Galeus melastomus*  
Female: stage C/3

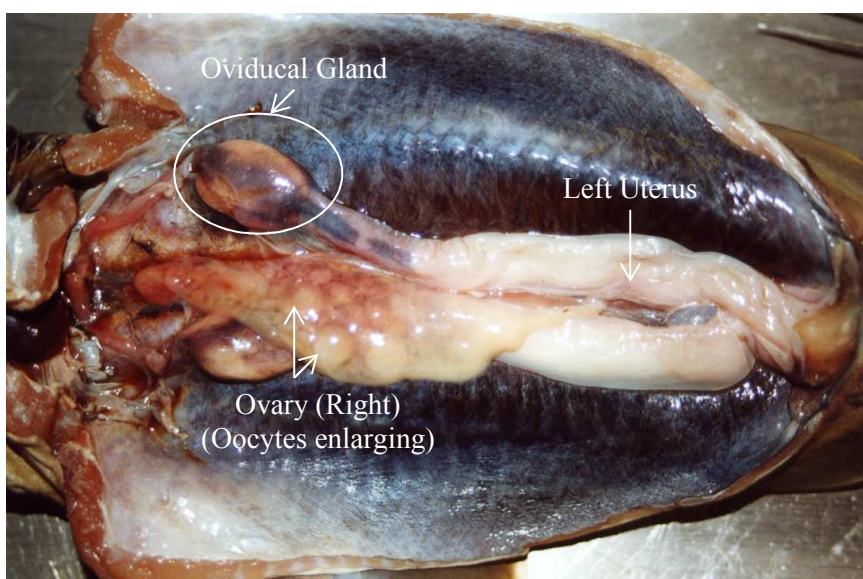


Figure 3:  
*Galeus melastomus*  
Female: stage C/3  
(advanced stage)

**Plate 4**

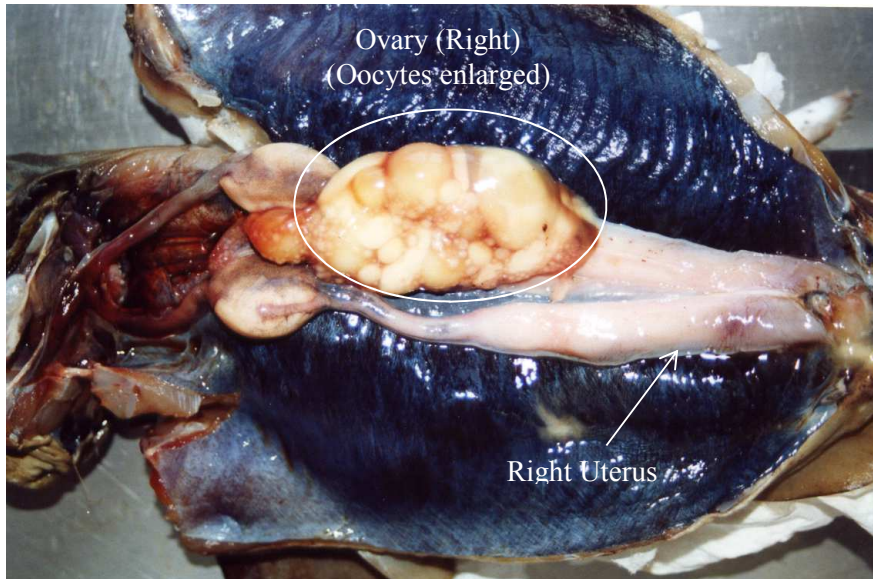


Figure 1:  
*Galeus melastomus*  
Female: stage C/3  
(final stage)

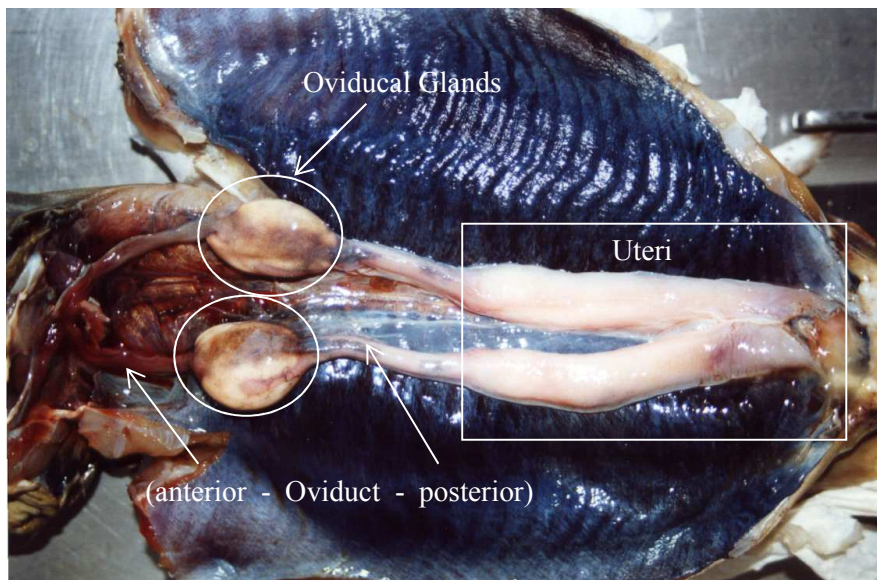


Figure 2:  
*Galeus melastomus*  
Female: stage C/3

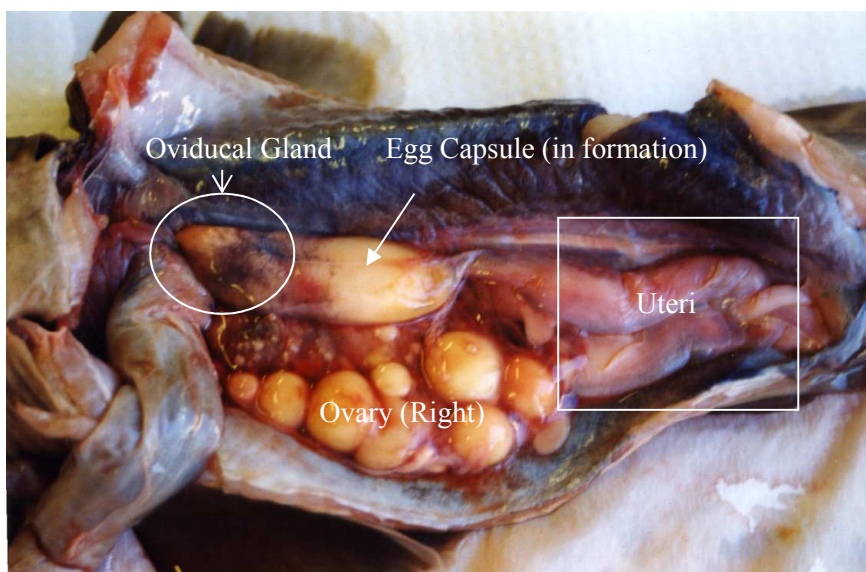


Figure 3:  
*Galeus melastomus*  
Female: stage E/5

Plate 5



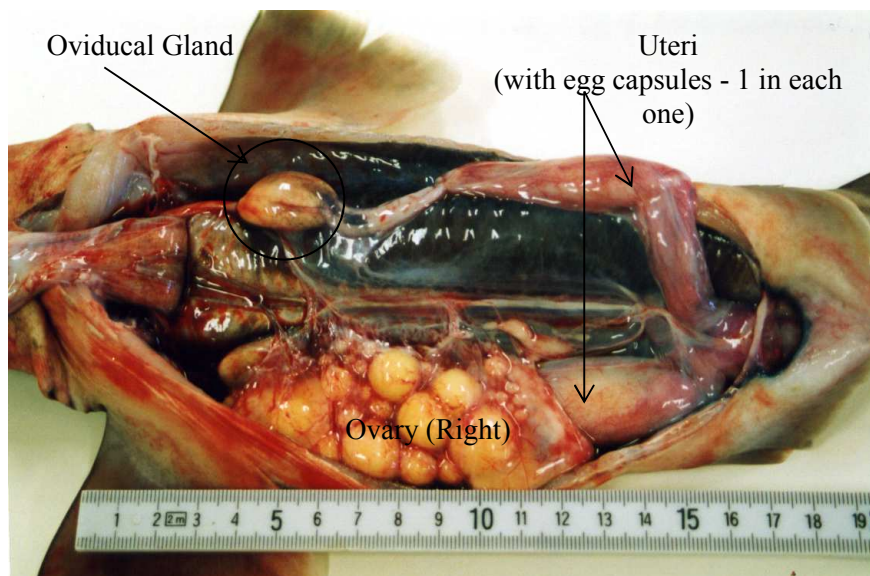
Figure 1:  
*Galeus melastomus*  
Female: stage E/2  
Egg capsules still in formation



Figure 2:  
*Galeus melastomus*  
Female: stage E/5  
Left egg capsule out of oviducal gland and still soft at upper end.



Figure 3:  
*Galeus melastomus*  
Female: stage E/5  
Right ovary in close up (oocytes in various sizes)



**Plate 6**

Figure 1:  
*Galeus melastomus*  
Female: stage F/6  
(initial stage)



Figure 2:  
*Galeus melastomus*  
Female: stage F/6  
Egg capsules (1 pair)  
fully formed and  
hardened, in close up



Figure 3:  
*Galeus melastomus*  
Female: stage F/6  
Right ovary in close  
up (oocytes in  
various sizes)

Plate 7

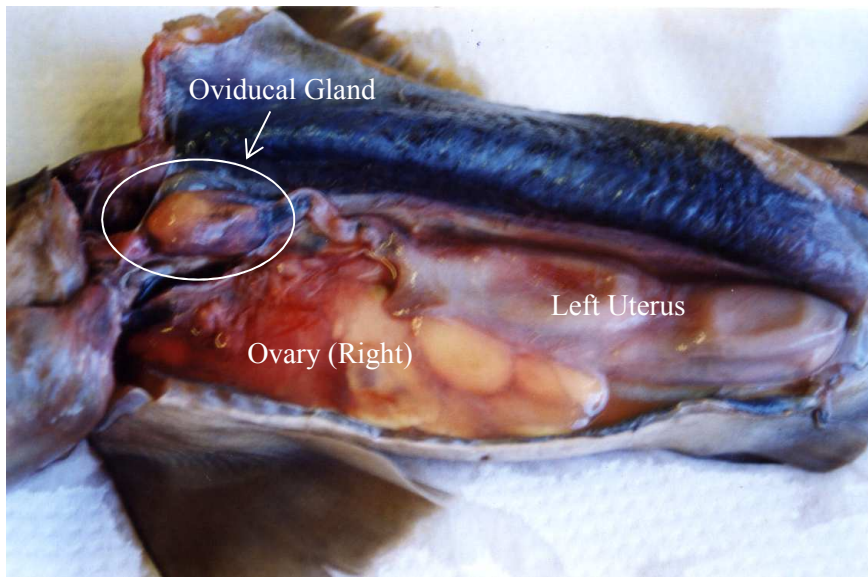


Figure 1:  
*Galeus melastomus*  
Female: stage F/6

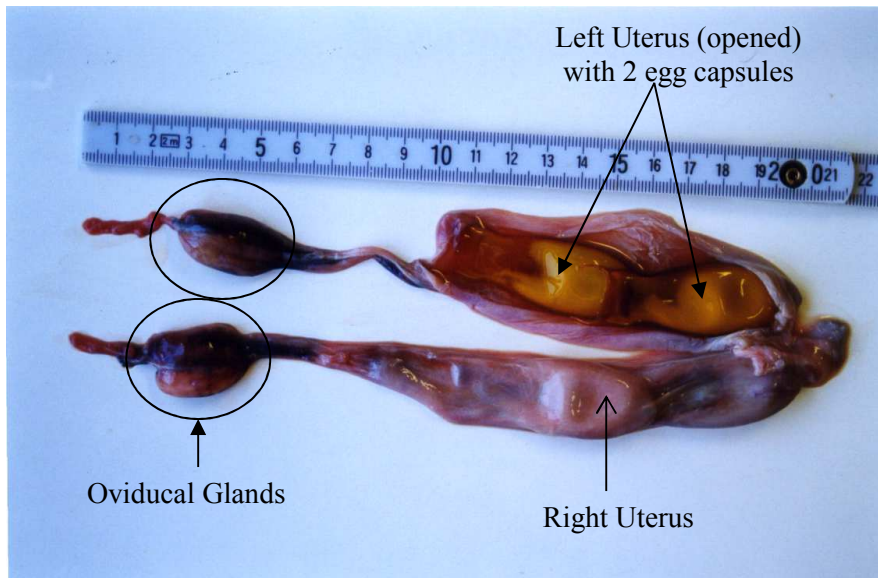


Figure 2:  
*Galeus melastomus*  
Female: stage F/6



Figure 3:  
*Galeus melastomus*  
Female: stage F/6  
Egg capsules (2  
pairs) fully formed  
and hardened, in  
close up.

Plate 8

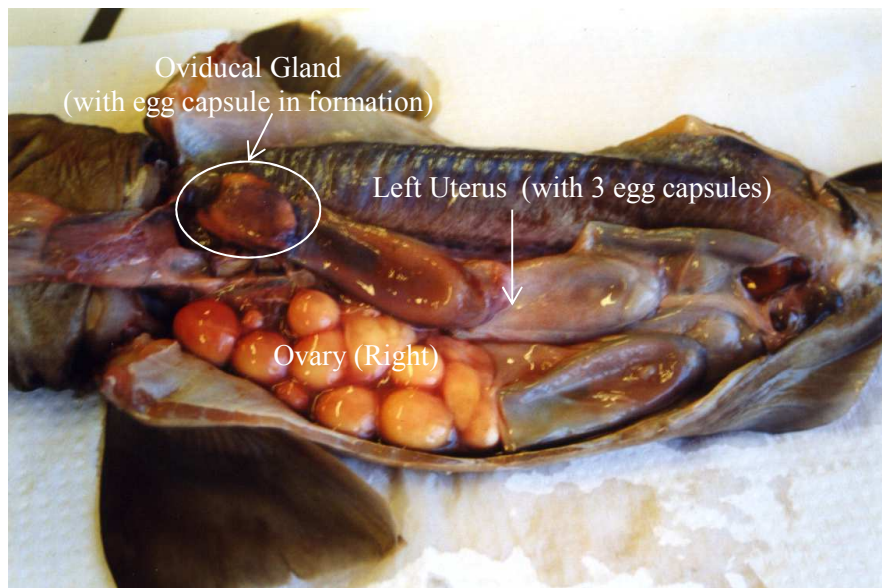


Figure 1:  
*Galeus melastomus*  
Female: stage F/6

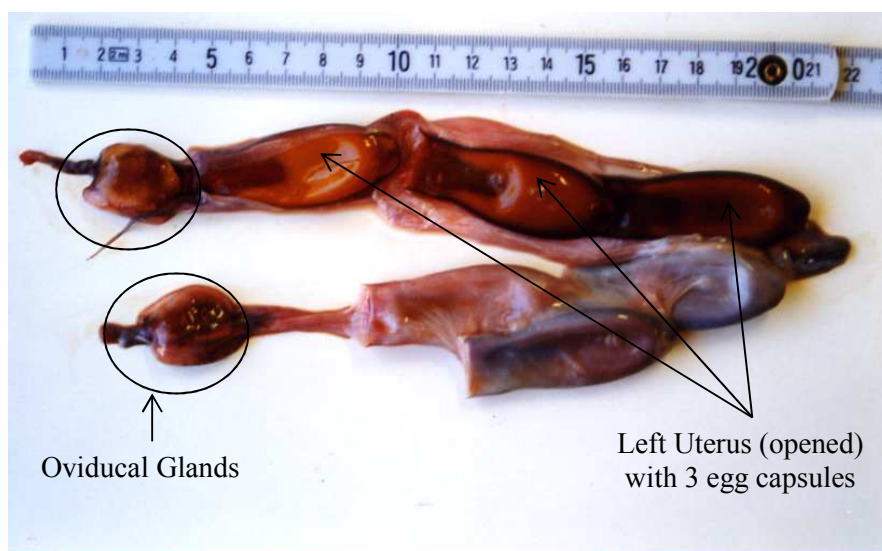


Figure 2:  
*Galeus melastomus*  
Female: stage F/6



Figure 3:  
*Galeus melastomus*  
Female: stage F/6  
Egg capsules (3 pairs)  
fully formed and  
hardened, in close up.

Plate 9



Figure 1:  
*Galeus melastomus*  
Female: stage F/6  
Egg capsule in close up



Figure 2:  
*Galeus melastomus*  
Female: stage F/6  
Right ovary in close up (oocytes in various sizes)

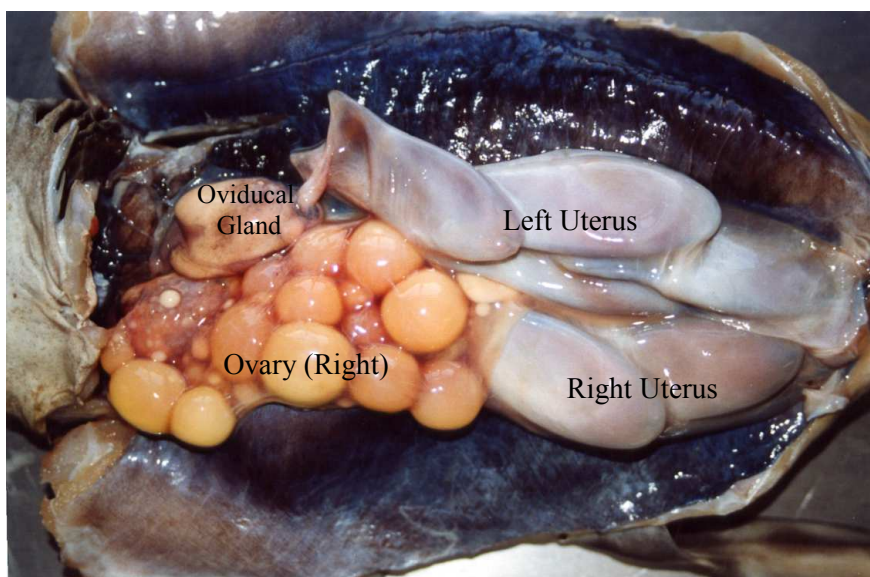


Figure 3:  
*Galeus melastomus*  
Female: stage F/6

**Plate 10**

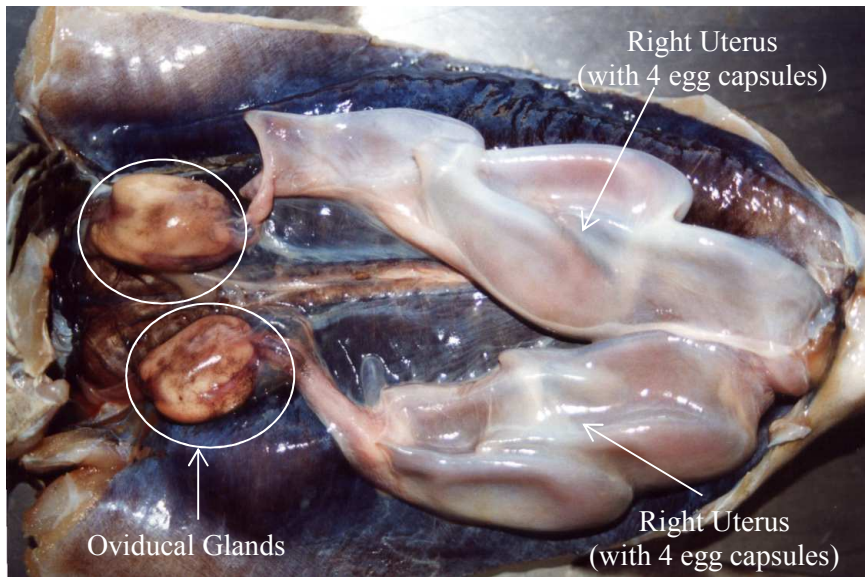


Figure 1:  
*Galeus melastomus*  
Female: stage F/6

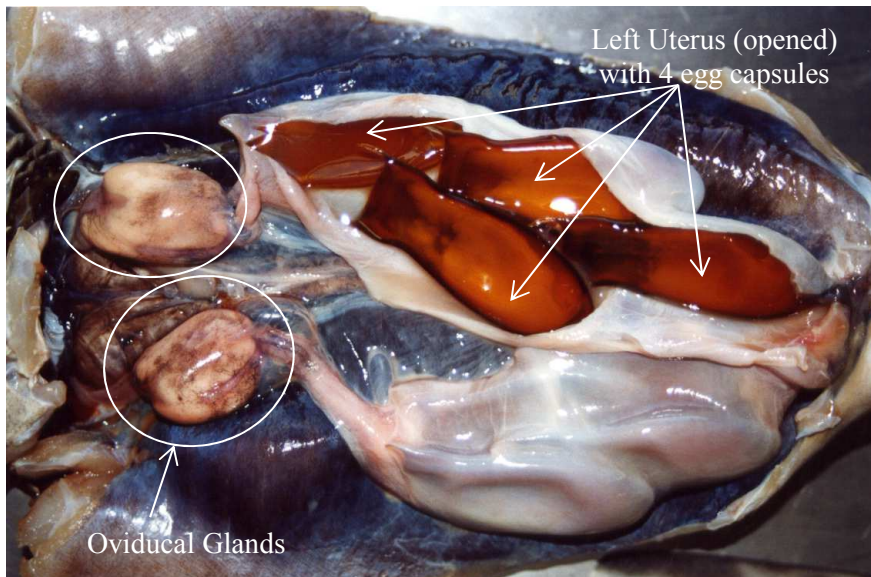


Figure 2:  
*Galeus melastomus*  
Female: stage F/6

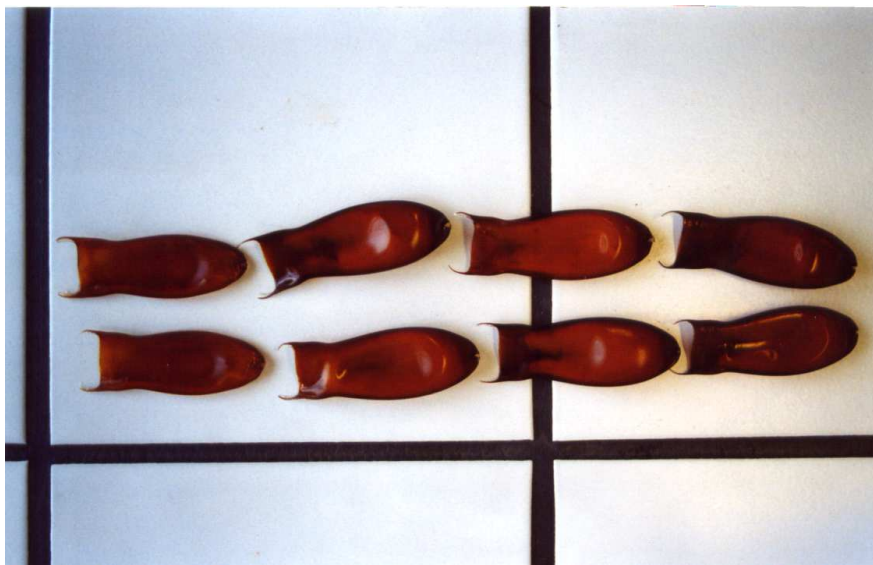


Figure 3:  
*Galeus melastomus*  
Female: stage F/6  
Egg capsules (4 pairs) fully formed and hardened, in close up.