Sheep and cow reproductive organs

We will investigate a sheep uterus and placenta, cow reproductive tract, and male sheep reproductive organs with this lab. You will have a pregnant sheep uterus (bicorneate uterus, cotyledonal placenta) to dissect. Several groups will work together to dissect a non-pregnant cow reproductive tract that includes uterus (also bicorneate and cotyledonal) and vagina. Both pigs and cows have non-invasive placentas, where the endometrium is not shead upon parturition (birth). There will also be a demonstration dissection of a ram reproductive tract.

Sheep uterus dissection:
When you first look at the uterus, note the relative sizes of the uterine horns to the body of the uterus. With the bicorneate uterus of the sheep, the body of the uterus is relatively larger than the uterine horns — it is the opposite with the bipartite shape of the cat uterus. Find the urinary bladder, ovaries, oviduct, ostium and cervix. Note the funnel shape of the ostium and how it leads into the oviduct. Since this is a pregnant uterus, an ovary will a corpus lutea within it (possibly two). They will appear as a bump along an ovary. Dissect into the ovary and find corpus lutea. The corpus luteum releases progesterone and estrogen to help maintain the endometrium and thus preserve the pregnancy. Dissect into the cervix. During pregnancy, the cervix is tightly closed and contains a mucus plug.

Dissect along the top of the body of the uterus. The thin clear layer that you see within the uterus is the chorioallantois layer (a combination of chorion and allantois) — this layer is the embryo’s contribution to the placenta. You will see the chorioallantois pinches together to form a funnel-like cotyledon that enters into a thick circular-shaped structure called a caruncle. Within the caruncle is endometrium, which is the mother’s contribution to the placenta. Together the caruncle and the cotyledon form a placentome, where nutrients are exchanged. Carefully cut into the chorioallantois. You will find the amnion layer behind it, surrounding the fetus. Remove the fetus from the amnion. Cut through the umbilical cord and see the umbilical arteries and veins.

Sheep uterus:
cotyledon (function)
cervix (function)
chorion/allantois
amnion
endometrium
umbilical cord
caruncle

corpus luteum
ovary
ostium (function)
oviduct

Ram reproductive organs:
pampiniform plexus
epididymus
ductus deferens
corpora cavernosa
glans penis
urethral process

Cow reproductive tract:
vagina
urethra
urinary bladder
clitoris
corpus luteum
ostium (infundibulum)
Cow reproductive tract
Sheep Uterus

Caruncles

Cotyledon Caruncle

Placentome

Uterine Wall

Placentomes

Ammion

Chorioallantois

Caruncle

Cervix

Ovary

Ostium

Oviduct
Ram (male sheep) reproductive tract

- Bladder
- Ampulla
- Sigmoid flexure
- Seminal vesicle
- Bulbourethral gland
- Vas deferens
- Urethral process
- Epididymis
- Testes
- Glans