Whew, we’ve been busy
Pups in the big pools, weanling filling up the edges

The common problem this week has been front flipper abscesses, ultrasound shows the pocket of fluid, while radiographs are normal. Treatment is drainage, antibiotics, warm compresses, and pain medications.
**Harbor Seals**: Basil NMLC 15-012 PPv [weaned !]
abandoned pup, hypoglycemia resolving, electrolyte disturbances resolving, reopened umbilicus, exposed to lice
male [admit] wt=8.1 kg, SL= 69 cm; [current] 12.0 kg BS=3/5
stranded 5/24/15 COA Deer Island ME; admit: 5/25/15;
last blood: 5/26/15; 5/28/15 EP
last rads: 5/26/15
Visual Inspection [Williams] : WNL; OK for pool 24 hrs

**Harbor Seals**: Rue NMLC 15-013 PPv [on the cusp of weaning]
abandoned pup, borderline hypoglycemia (resolving), exposed to lice
male [admit] wt=7.1 kg, SL= 7.4 cm; [current] 10.1 kg BS=2/5
stranded 5/26/15 MMoM ME; admit: 5/27/15;
last blood: 5/27/15; WATCH BG; 5/28/15 EP
Athens Pan-Herpes PCR negative 6/10/15 blood, nasal and ocular swabs
last rads: 5/28/15
HX: blood on OGT after feeding, OK to monitor
Visual Inspection [Williams] : WNL; OK for pool 24 hrs
P: check electrolytes 1 week off flornef = WNL

**Harbor Seals**: Juniper NMLC 15-015 PPv [weaned !]
abandoned pup, hyponatremia, lice, hypoglycemia [BG=126]
female [admit] wt=7.8 kg, SL= 80 cm; [current] 11.0 kg x cm BS=2/5
last blood: 6/4/15 (BG=116)
last rads: 6/9/15 failed; 6/24/15 (lateral), 6/30/15 WNL
Visual inspection: WNL AL OK for pool 24 hrs
P: check electrolytes 1 week off flornef = WNL

**Harbor Seals**: Sage NMLC 15-016 PPv [on grule]
abandoned pup, fever, oral ulceration, hyponatremia, hypoglycemia (109) exposed to lice
female [admit] wt=7.1 kg, SL= 79 cm; [current] 8.7 kg x cm BS=2/5
stranded 6/7/25, Scarbough Maine MMOME; admit: 6/7/15;
last blood: 6/7/15 (BG=159)
Athens Pan-Herpes PCR negative 6/10/15 blood, nasal and ocular swabs
last rads: 6/9/15 failed
Visual inspection: WNL AL OK for pool 24 hrs
P: check electrolytes 1 week off flornef = WNL
**Harbor Seals**: Salt NMLC 15-022 PPv weanling
male [admit] wt=13.5 kg, SL= 93 cm; [current] 13.5 kg BS=2/5
oral lesions, fractured left mandible, umbilical ulcer, wounds, swollen
hind flippers, melena, tapeworm, gastric worms, & lice
stranded MA 7/X/15; admit: 7/6/15;
last blood: 7/28/15 WBC WNL, but Lymphopenia still decreased
hind flipper BG=137 mg/dl; dorsal sinus BG = 140 mg/dl

last rads: 7/7/15 (full set + flippers)
fecal: 7-22-15: Cryptocotyle, Diphyllobothrium, Pseudoterranova ova
PE: [Berridge 7-28-15] TPR= 100.9, 140 12-16, mouth soft tissues are healing but a non union of
the left mandible with a fracture caudal to the canine tooth and exposed necrotic mandible. Only
the last post canine tooth is left, but Salt is eating fish. Other skin wounds and the abdomen are
healed up.
A: while the jaw is unlikely to heal on it’s own, surgical repair may also not be successful and
Salt has responded positively to rehabilitation and is eating and looking much better and stable.
P: continue with pain meds and rehab, a decision on the jaw is pending and we’ll check on this
lesson each week at rounds.

**Harbor Seals**: Thistle NMLC 15-025 PPv weanling
female [admit] wt=10.7 kg, SL= 81.2 cm; [current] x kg BS=2/5
abscessed left front flipper, depressed
stranded Wells ME 7/22/15; admit: 7/23/15;  
last blood: 7/23/15 WBC WNL, dehydrated, increased CK, GGT, low albumin (2.1), and Ca;  
sodium is 145 mmol/L  
dorsal sinus BG = 142 mg/dl  
last rads: 7/23/15 (chest + flippers): The chest in DV and lateral projections us normal, the  
blubber lay is almost non existent. The flippers both right and left are normal on radiographs.  
fecal: 7-23-15: NPS, possible melena  
PE: [Voorhis 7-28-15] TPR= 98.5, 90, 10, stressed with heavy breathing, hydrated but lethargic  
with tremors and possible building eyes. The hind flippers are swollen and the LEFT front  
flipper is very swollen but there is no creates.  
A: the exact cause of Thisle’s disability is elusive but severe and her prognosis is poor.  
Advanced malnutrition is suspected and the primary problem, with soft tissue trauma to the front  
flipper but protein metabolism and disease may be the cause of the tissue edema.  
P: ok to apply ice to flippers, continue with antibitoics, pain meds, nutritional and fluid support.  
note: 7-30-15 purulent d/c from ventral/ palmar aspect of LFF, cultured and flushed with LRS  
200 ml  
P: add flush to wound/abscess TID sterile saline, continue antibiotics

Harbor Seals : Chamomille NMLC 15-026 PPv weanling  
female [admit] wt=14.1 kg, SL= 85 cm; [current] x kg BS=2/5  
abscess right front flipper, fever, crusty nares  
stranded NH 7/25/15; admit:7/25/15;  
last blood: 7/25/15 increased WBC but lymphopenia  
dorsal sinus BG = 136 mg/dl  
last rads: 7-28-15 Chest DV and L lat., RFF DV: soft tissue swelling of RFF, other WNL  
fecal:
PE: [Williams, Voorhis, Berridge 7-28-15] TPR= 100.3, 120, 20, mm pink multiple puncture wounds on chin and crusting around muzzle and face. Wounds and ulcers to hind flippers, very swollen right front flipper.

NOTE 7-30-15 Right flipper with fluctuant swelling
Ultrasound shows a pocket from the carpus to the shoulder, the abscess was opened with a #10 blade and flushed with 500 ml LRS
A: wounds and abscess
P: antibiotics, pain meds, and flush abscess and treat wounds
**Harbor Seals**: Clove NMLC 15-027 PPv weanling female [admit] wt=9.1 kg, SL= 85 cm
wound son shoulder and near umbilicus, lymphopenia, melena
stranded ME 7/25/15; admit: 7/26/15; died 7/27/15, necropsy 7/28/15
last blood: 7/26/15 CBC low lymphocytes
dorsal sinus BG = 93 mg/dl

PE: [Williams/Berridge 7-28-15]
Necropsy: The seal is early weanling female harbor seal, an extraordinary thin, blubber layer is 0-2 mm. There are ulcerative and infected wounds of the shoulder and ventral abdomen. The umbilicus was externally normal, but the urachus was large and well developed but not grossly infected, but he tissue saved intact. There is no aural or nasal discharge. The middle ear is clear and the tympani membranes are normal. The brain is normal. Both eyes are normal. No lice were detected. Incision into the soft pallet found several nasal mites. The nasal turbinates are inflated with small pinpoint black dot, and the air passage is restricted. Full thickness nasal passages were collected for decalcification. The neck was normal the thyroids were collected, and appears slightly larger then expected. The heart was normal. The chest had negative pressure. The lungs were dark but palpated normally, the major airways were clear. The periphery of the lungs had pale discolored mottled areas, lungworms were not detected grossly. The adrenal glands were grossly normal and collected for histopathology only. The kidneys were normal. The female reproductive organs were immature, normal and collected. The bladder was small and contracted and contained no urine. The spleen was normal and adjacent to the enlarge pancreas, which was swollen diffusely. The stomach had bile and mucous, no parasites or food material. The intestines had areas of mild gas dissension, but no serosal lesions and the GI tract was patent. Collection of intestinal contents into a sive found several small intact tapeworm, a single nematode, and possible tiny flukes. The colon had liquid black material and no formed feces.

**Gross Findings:**
- pancreatic swelling
- congested nasal passages
- peripheral lung discoloration

**Necropsy Parasitology**
- nasal mites mild (4)
- cestodiasis mild 3-5 small tapeworms
- nematodes, small intestine mild (1)

Tentative COD: inanation/starvation, malnutrition with low protein and pancreatitis, and mild parasitism.

Histopathology Pending.
**Harbor Seals**: Mint NMLC 15-028 PPv weanling male [admit] wt=x kg, SL= x cm
hemorrhagic peritonitis
stranded: Cape Cod Canal MA 7/30/15; admit: 7/30/15; euthanized 7/30/15, necropsy pending
last blood: 7/30/15
last fecal: 2x flot= NPF
dorsal sinus BG = 297 mg/dl
PE: [Williams 7-30-15] TPR= 97.5, 60, 60 with rattles and rails; depressed and shock. Oral
exam found blood on chin. Small wound on right front flipper, ulcerated D2-3. Distended
abdomen with bloody foul smelling discharge from prepubial opening.
Adm: 1cc bupremorphine 0.3 mg, 3cc 22.7 mg/ml enrofloxicin IM, 2 cc PPG IM
ABD US: free fluid in abdomen with clear fluid demarkation line, non-dependent, on the Right

![Image](image.png)

A: advanced peritoneal disease, progress is grim. P: euthanasia ADM: 3cc euthanasia IV
pronounced as deceased.

**Under the Microscope**: Two (or Three) is Better the One
We had our first confirmed case of infection with the tapeworm *Diplogonoporus tetrapterus* from Salt the Harbor seal weanling. This genus is in the family of the Diphyllobothriidae but is characterized by two (or more) reproduce sets and gonado pores per proglottid (segment) [see below]. There are two provisionally valid species from the genus that effect Harbor Seals, the other is suspect in my opinion. *Diplogonoporus mutabilis*, as described (Belopolskaya, 1994) as a new species from the Harbor seal in Japanise waters, does not provide an image of the scolex and there are no real deviations of the measurements from *D. tetrapterus*, so I’m willing to call this *Diplogonoporus tetrapterus*. The infestation was quite severe and large masses of worms were expelled after the treatment for lice [ivermectin 0.2 mg/kg PO once], and while I’m not convinces that ivermectin had a direct response here, Salt is lucky not to have developed a linear forgiven body intestinal obstruction. We’ll check the
stools for more eggs to see if we feel the infestation is resolved. The eggs can not be morphologically distinguished from any other Diphyllobothrid ova.