Bye, Sprout

We lost Sprout to multi systemic disease, which is common with weanlings, so much disease in fact they are hard to characterize, but we can only try . . . .

Rounds Notes is a report on the health of animals at the National Marine Life Center from Sea Rogers Williams VMD for the staff, volunteers, and community of the center including professionals involved the captive care of similar species, the views expressed are not necessarily that of NMLC. Information in Rounds Notes should be considered confidential and used solely to benefit the health of aquatic animals everywhere.
**Harbor Seals**: Rue NMLC 15-013 PPv [weaned]

- Eye injury (right) resolving
- 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;
- Athens Pan-Herpes PCR negative 6/10/15 blood, nasal and ocular swabs
- Last rads: 5/28/15

**Harbor Seals**: Sage NMLC 15-016 PPv [weaned]

- 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/?/25, Scarborough 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

**Harbor Seals**: Thisle NMLC 15-025 PPv weanling

- Female [admit] wt=10.7 kg, SL=81.2 cm
- Tape worms, vomiting/regurgitation, failure to thrive
- Stranded Wells ME 7/22/15; admit: 7/23/15; died 9/1/15, necropsy
- Last blood: Herpes PCR to Athens (negative)
- Gross necropsy:

**Harbor Seals**: Chamomile NMLC 15-026 PPv weanling

- Female [admit] wt=14.1 kg, SL=85 cm; [current] x kg BS=3/5
- Abscess right front flipper-resolved, cough?
- 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: 8-6-15: Ascarid eggs with halo around 42um dia. = *Pseudoterranova* sp. by ova.
- Culture of abscess = no aerobic growth
- P: fenbendazole 50 mg/kg PO SID 3 days.
- Note: lice observed and confirmed P: ivermectin 0.2 mg/kg PO once
- PE: [Voorhis 8-24-15] TPR= 100.0, 90, 30, right front shoulder and flipper is normal, all other system and oral exam are normal
- A: OK to release if passing blood work, -CRW
Harbor Seals: Jasmine NMLC 15-029 PPv weanling
female [admit] wt=12.3 kg, SL= 89.75 cm; [current] 13.4 kg BS=3/5
ulcerative dermatitis, cheilitis, adrenal depletion
stranded Wells ME 8/16/15; admit:8/18/15;
last blood: 8/18/15, hyperkalemia, hyponatremia, low albumin Distemper to Athens (negative)
Phocine Herpes Virus-1 ELSIA (moderate POSITIVE)
dorsal sinus BG = 142 mg/dl
last rads: 8-20-15; 3 views, two DV chest and abdomen, lateral chest-abdomen (L lat), no pulmonary or pleural disease, normal cardiac size and shape, abdomen has decreased detail typical of seals, blubber layer is 0.6 cm, no abnormalities in the skeletal elements seen in the series A: no lesions observed
 fecal: 8-20-15 NPS
PE:[Berridge 9-22-15] TPR 95.6, 140, 10, eyes moist, color good, flipper and abdomen palpate normally, blood collected. A: much improved in behaviors and general appearance. [Williams] presumed to be fighting off PHV-1,may have turned a clinical corner and appears headed to improved eating, prognosis is improved.

Harbor Seals: Lemmongrass NMLC 15-030 PPv weanling
female [admit] wt=14.5 kg, SL= 97.5 cm; [current] x kg BS=x/5
CC: fever, stomatitis/cheilitis, swollen left flipper, tapeworms, abdominal forigen material
stranded Bidderford ME 8/29/15; admit: 9/3/15;
last blood: 9/22/15
dorsal sinus BG = x
last rads: 9/4/15- lateral / DV chest and abdomen, gas in stomach and small intestine, bone density foreign material “tooth” shaped, in abdomen, non obstructive pattern, location on the left side, can not confirm within intestinal tract, DV flippers with soft tissue swelling of hind flipper but no fractures or orthopedic displacements.
Husbandry Note: not swimming or eating today, major setback with behaviors
PE [Voorhis 9-22-15] TPR= 98.8, 120, bulging eyes, left hind flipper still swollen but not fluctuant, but painful, no nasal d/c
P: CBC, CG-8

Harbor Seals: Onion Flake NMLC 15-034 PPv weanling
male [admit] wt=16.2 kg, SL= 96.5 cm; [current] 16.2 kg BS=2/5
CC: fever (106.5), labored breathing, body wounds, flipper wounds, muzzle wounds / cheilitis, respiratory acidosis, Anisakids left lung lobe consolidation, pneumonia presumed severe lungworm
stranded Province town 9/17/15; admit:9/17/15;
last blood: 9/17/15- increased PCO2, decreased HCO3, hypokalemia
dorsal sinus BG = 172
last rads:8-18-15 (3 plates)Onion
Rads 9/22/15
3 plates
chest lateral, increased density in cranial ventral aspect cranial to heart, could be
normal aortic arch, dorsal caudal pattern with mild patchy interstitial patter

ABD: decreased detail is typical for speices and age
blubber layer is subjectively decreased (aprox < 1 cm)
DV hips and flippers: WNL
DV chest: marked alveolar pattern in the LEFT middle lung are, tissue cranial and
caudal is WNL, no pleural effect, RIGHT lungs also show a consolidation in the middle
lung area, there are no distinct lobes in seals, heart evaluation suffers from overlaping
lung lesions.
DV front flippers and shoulder: WNL
A: advanced pneumonia, R/O lungworm, viral, bacterial
PX: guarded.

C Rogers Williams VMD 9-28-15
Harbor Seals: Sprout NMLC 15-035 PPv weanling
female [admit] wt=9.8 kg, SL= 79 cm
CC: fever (102), labored breathing, crusty ocular discharge, swollen Left hind flipper, hypoglycemia (47), left ocular opacity, uveitis, wounds, swollen hind flippers, melena, abscess
Gross: peritonitis, parasites, lung disease
stranded Plumb Island MA SSC 9/21/15; admit:9/21/15; died 9/28/15, necropsy 9/29/15 MBL
Rads:Sprout
Rads 9/25/15, 3 plates
DV chest: rotated, soft tissue and pleural effect middle RIGHT chest, possible interstitial pattern mid chest, LEFT with rib fractures 8-10 non displaced, associated lack of detail of the lung margins, can not confirm intrathoracic disease associated with fracture, cranial LEFT lungs with advanced interstitial pattern
DV ABD: minimal gas in small intestine and lack of detail typical of species, blubber lays is decreased, and surface soft tissue trauma on the LEFT side suspected to be skin and subdermis
DVL fron limbs over exposed but no lesions seen
Left Lateral chest and abdomen: no new information the rib fractures are not appreached in these views.
DV hips and hind flipper: soft tissue irregularities on the LEFT side no boney abnormalities

A: DX trauma, fractured ribs on LEFT 8-10, soft tissue trauma on the RIGHT chest also suspect pneumonia on the LEFT upper lung area
C Rogers Williams VMD 9-28-15
Gross necropsy:
A young female harbor seal in poor condition was presented for necropsy in good condition and cooled from ice. There were ulcerative lesions on the right lips, and a simi circular set of ulcers on the left caudal body wall, with a complex deeper distribution. There was per-acute peritonitis with greater then 1 liter of tan fluid in the abdomen, and some fiberinous attachments to the stomach and intestines. The liver was congested and the edges rounded, firm and swollen, the gall bladder was diented with yellow bile and gas. The stomach and esophagus had black material in the lumen but a perforation or ulcer or generalized devilalizing or bleeding lesion was not observed. The intestines were distended in the jejunum and a single large tapeworm that could have represented an obstructive lesion was removed with the scolex. The head had a small
ulcerative wound on the chin, the left ventral nasal turbinates were congested but the nasal passages were not obstructed and normal tissue was clear along the dorsal passages. The brain has colored tissue along the meningitis and the brain steam on the ventral surface. The ears were not examined. No adult Otostrongylus lung worms were observed, the lungs had areas on patchy consolidation and congestion. There was no pleural or pericardial fluid. The kidneys and adrenals were normal. The immature female urogenital tract and urinary bladder was normal. The spleen was normal. The pancreas had mild fibrin surface attachments. The entire intestinal luminal contents were squeezed into a fine mesh and the remaining material collected, no intestinal flukes were determined with the unaided eye, but this method resulted in a good yield of the acanthlocephans. The left hind flipper was edematous. The heart was normal and the fractured ribs seen on radiographs on the left were completely healed and appeared to be an old lesion.

The cause of the melena was not immediately obvious. An oral lesion, or the large number of acanthlocephalans in the intestine could account for the bleeding. The cause of the peritoneal fluid was likely extension of the abscess along the body wall and subsequent peritonitis, the lack of fibrin or a more pronounced inflammation of the body wall likely means these events were close to the time of death.

The cause of death is initially attributed to sepsis with peritonitis from ulcerative dermatitis, complicated by respiratory disease and possible Parafilorides lungworm infection. GI bleeding and Corynosoma infestation was a contributing factor. The cause of the liver and gall bladder disease and it’s significance are not known at this time. A possible small intestinal obstruction secondary to a linear-forigen-body reaction to a tapeworm also contributed to disability.

Necropsy Parasites, gross interpretation.
- tapeworm, 1 intact Diplogonoporus with scolex
- possible thread-like lung worms in major bronchi
- thread like worms in intestine
- few Anisakid worms in stomach, one in body cavity
- large numbers of Corynosoma in intestines and some on serosal surfaces

**Harbor Seals**: Garlic NMLC 15-036 PPv weanling
male [admit] wt=17.4kg, SL= x cm
CC: wounds, mucoid nasal d/c
stranded ME SSC 9/21/15; admit: 9/22/15; euthanized 9/29/15, necropsy 2/29/15
last blood: 9/22/15 (CG8, CBC, SCP)
dorsal sinus BG = 151
last rads: Garlic
Rads 9/25/15, 3 plates
DV chest: complete consolidation of a band of tissue in the middle cranial middle aspect, with trapped pocket of lung tissue in the right upper quadrant with alveolar pattern, the RIGHT caudal lungs are improved but still show a bronchiolar pattern; the LEFT lung is less effected but a cranial mild alveolar pattern and triangular caudal alveolar pattern is reminiscent with an infarct injury, no pleural effect is seen
DV: cranial abdomen, small intestinal gas pattern with lateral and cral displacement and loss of detail
Lateral Chest: cranial to the heart is a loss of lung tissue which may be diseased lung or the normal aortic shadow, an advanced dorsal caudal patchy interstitial to alioval pattern is present.
DV: hips and hind flippers, possible mild soft tissue swelling on the left hind flipper, other WNL no boney lesions.
A: advanced pneumonia with consolidation of the RIGHT middle lung
R/O lungworm, viral, bacterial
C Rogers Williams VMD 9-28-15

last fecal:
PE: [Williams 9-22-15] Found unresponsive with a blood glucose of 39 mg/dl, was moved to the incubator given IV fluids and IV dextrose, after 1 hour there was little improvement, HR=20, RR 4 with rails, and still non-responsive and a decision for euthanasia was made. Adm: 3 cc Beuthansia D IV dorsal sinus, pronounced as dead. necropsy at MBL today.
Gross Findings:
Gross Necropsy Parasitology:
Gross Findings
  advanced pulmonary emphysema separation of lung tissue along septial lines.
  preliminary cause of death is respiratory failure and sepsis.

**Harbor Seals**: Tarragon NMLC 15-037 PPv weanling
female [admit] wt=22 kg, SL= x cm; [current] x kg BS=1/5
CC: wounds (circular cutaneous ulcers)
stranded at sea: 9/27/15; admit: 9/27/15;
last blood: 9/27/15 (CG8, CBC, SCP): mild hypokalemia
dorsal sinus BG = 164
last rads: (2 views- chest)
last fecal: fecal water in crate, + *Contracecum* ova +, no larvae

PE: [admit- Williams 9-29-15] TPR= 89.9, 100, 20, no aural d/c, lips and oral cavity WNL, eyes clear and bright [IOP R= 77,74,53,68; L= 45, 40], small ulcerative wounds on ventral surface of front flippers, larger circular to oval lesions on body, ulcerated to muscle layer, with blisters under the skin sampled for bacterial culture. Female, minor wounds on hind flipper, alert and responsive and typical aggressive harbor seal normal behaviors. The ulcers appear as eruptions of the multifocal systemic dermal abscesses, with presumably a hematogenous bacterial etiology.

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