

Table 1. Summary of selected publications describing novel pathogens or disease syndromes detected in animals submitted for rehabilitation.

<b>Pathogen</b>	<b>Host/History</b>	<b>Reference</b>
Phocine herpesvirus 7 (PhHV-7)	Harbour seals ( <i>Phoca virulina</i> ). Some seals with ulcerative gingivitis and glossitis had PhHV-7 infections, although clinically normal seals were also infected.	Bodewes et al. 2015
Poxvirus	Big brown bats ( <i>Eptesicus fuscus</i> ). Bats had necrosuppurative osteomyelitis associated with a novel genus of poxviruses.	Emerson et al. 2013
<i>Mycoplasma gallisepticum</i>	House finches ( <i>Carpodacus mexicanus</i> ) and other passerines. Conjunctivitis caused by <i>M. gallisepticum</i> has rapidly moved throughout the eastern United States.	Wellehan et al. 2001
<i>Mycoplasma sturni</i>	Cliff swallows ( <i>Petrochelidon pyrrhonota</i> ), American crows ( <i>Corvus brachyrhynchos</i> ), European starlings ( <i>Sturnus vulgaris</i> ), blue jays ( <i>Mimus polyglottos</i> ) and northern mockingbirds ( <i>Cyanocitta cristata</i> ). Conjunctivitis, rhinitis, and sinusitis (lesions similar to lesions in passerine birds with <i>M. gallisepticum</i> infections) were noted.	Ley et al. 1998; Wellehan et al. 2001; Ley et al. 2012
brevetoxin	Double-crested cormorants ( <i>Phalacrocorax auritus</i> ). Data examined an association between admittance of neurologic cormorants and <i>Karenia brevis</i> blooms. Birds had evidence of toxin in tissues.	Kreuder et al. 2002
<i>Cryptosporidium baileyi</i>	Otus owls ( <i>Otus scopus</i> ). Report of ocular and respiratory disease associated with this parasite.	Molina-Lopez et al. 2010
<i>Caryospora daceloe</i>	Laughing kookaburra ( <i>Dacelo novaeguineae</i> ). Routine fecal exam revealed novel coccidian parasite.	Yang et al. 2014

Table 2. Additional examples of increased knowledge on known pathogens by investigation of animals in a rehabilitation setting.

Pathogen/Disease	Host/Major findings	Reference
Ranavirus	Eastern box turtles ( <i>Terrapene carolina</i> ). Surveillance of turtles at several centers helped determine prevalence, clinical signs, and geographic distribution of this pathogen of frogs and reptiles.	Allender et al. 2011
Beak and feather disease virus	Eastern rosellas ( <i>Platycercus eximius</i> ). These birds were frequently infected and may pose a risk to other birds in center; practice strict quarantine procedures.	Jackson et al. 2014
Phocine herpesvirus-1 (PhHV-1)	Harbour seals ( <i>Phoca vitulina</i> ). Frequent outbreaks of PhHV-1 in rehabilitation centers occur. Research determined that transmission was through direct contact and likely vertical transmission. Virus was common in free-ranging animals and disease most often occurred in neonatal and weanling pups.	Goldstein et al. 2004; Himworth et al. 2010
Fibropapillomatosis (FP)	Various sea turtles (e.g., green turtles [ <i>Chelonia mydas</i> ], loggerhead turtles [ <i>Caretta caretta</i> ]). Seasonal and geographic location trends were noted. Animals with ocular FPs were less likely to survive. Laser-mediated tumor removal was treatment of choice.	Foley et al. 2005; Page-Karjian et al., 2014; Page-Karjian et al. 2015
<i>Clostridium difficile</i>	Harbour seals ( <i>Phoca vitulina</i> ). Necrohemorrhagic enterocolitis caused by bacteria when animals were in rehabilitation was noted. To minimize risk, use antibiotics judiciously, have effective biosecurity and cleaning protocols.	Anderson et al. 2015
<i>Mycoplasma gallisepticum</i>	House finches ( <i>Carpodacus mexicanus</i> ). Birds had conjunctivitis and it was determined that treatment of birds in care resulted in resolution of signs and lesions but birds remained asymptotically infected.	Wellehan et al. 2001

<i>Chlamydophila psittaci</i>	Blue-fronted Amazon parrot ( <i>Amazona aestiva</i> ). Poor husbandry and delays in diagnosis resulted in high mortality.	Raso Tde et al. 2004
<i>Chlamydia</i> spp.	Koalas ( <i>Phascolarctos cinereus</i> ). Analysis of >10 years of records for clinically ill koalas indicated that treatment protocols helped but could need improvement and that younger aged animals and those that received ancillary treatments were more likely to be released. More access to diagnostic tests was noted as a need to assist with koala rehabilitation.	Griffith & Higgins 2012
<i>Leptospira interrogans</i>	Capuchin monkeys ( <i>Cebus</i> spp.). Rodent infestation in rehabilitation center lead to leptospirosis outbreak.  Northern elephant seals ( <i>Mirounga angustirostris</i> ). Histologic evaluation of leptospirosis cases in seals was provided.	Colegrove et al. 2005; Szonyi et al. 2011
<i>Trichomonas gallinae</i> and <i>T. stableri</i> (novel species)	Pacific Coast band-tailed pigeon ( <i>Patagioenas fasciata monilis</i> ). Investigations into trichomoniasis in band-tailed pigeons and related sympatric birds revealed two different parasite species, one of which was novel, caused clinical disease.	Girard et al. 2014
<i>Spirometra erinacei</i>	White-lipped treefrog ( <i>Litoria infratrenata</i> ). Previously found various <i>Littoria</i> spp. were in poor condition when they had high parasite burdens. Examination of data from frogs admitted to a care center found a lack of spatial and temporal patterns of cases which suggested that this parasite is endemic.	Berger et al. 2009; Young et al. 2012
<i>Aviosperpens</i> sp.	Western grebe ( <i>Aechmophorus occidentalis</i> ). This parasite was found well outside the normal range.	Latas et al. 2015
Tick paralysis caused by <i>Ixodes holocyclus</i>	Spectacled flying-foxes ( <i>Pteropus conspicillatus</i> ). Investigations of tick paralysis to determine the impact of this syndrome on flying fox populations.	Buettner et al. 2013

