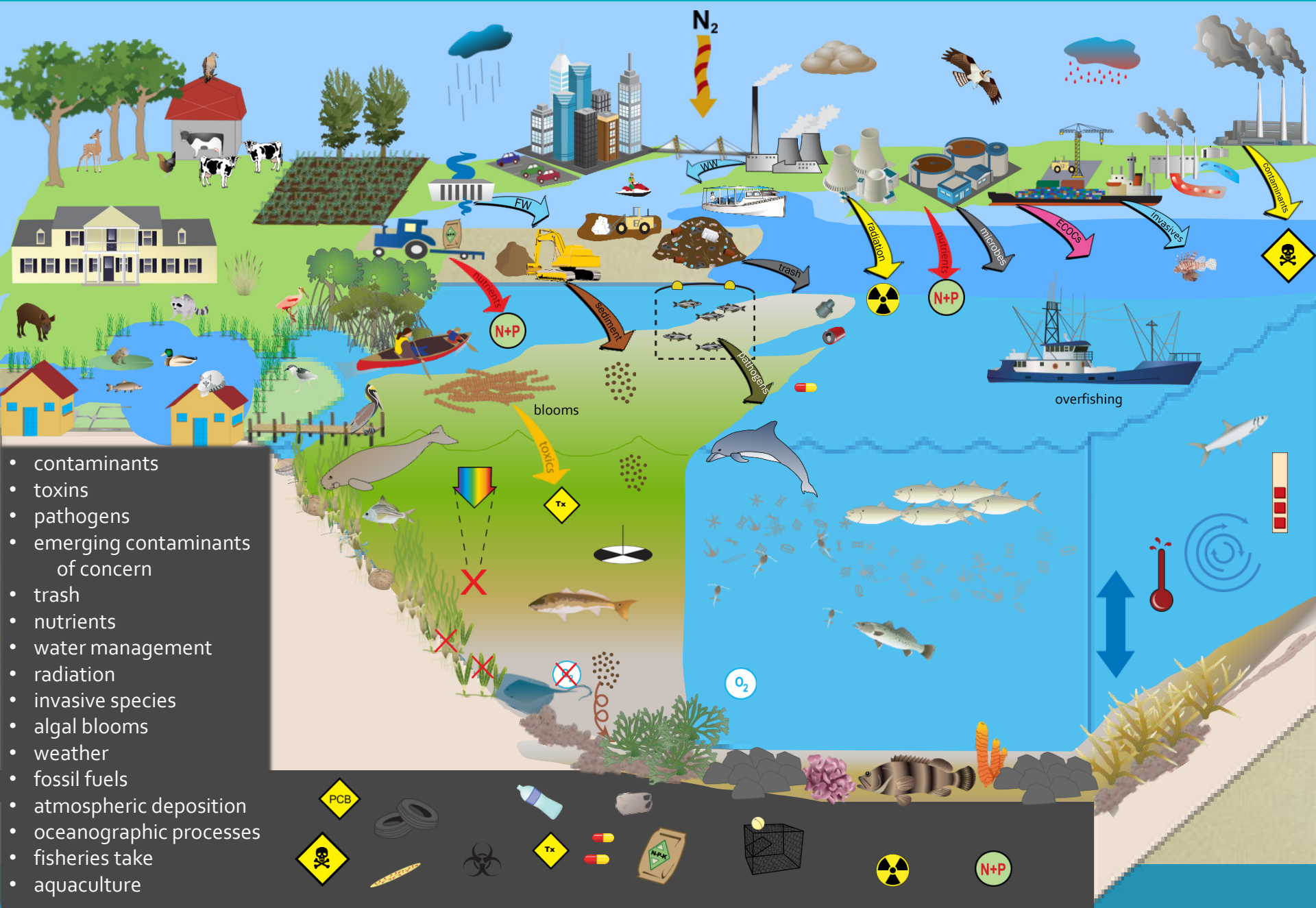
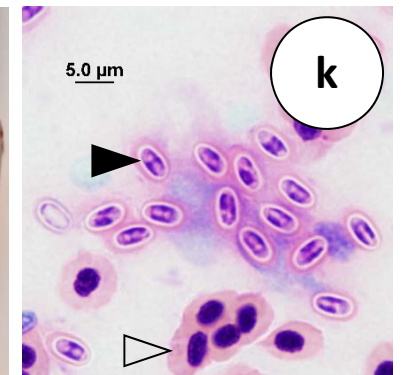
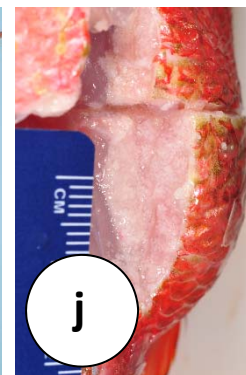
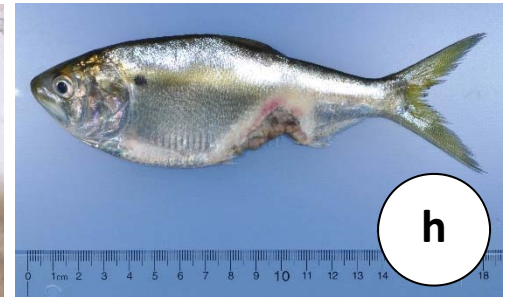
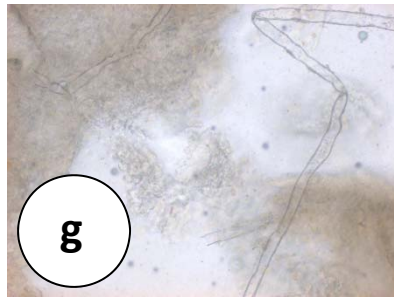
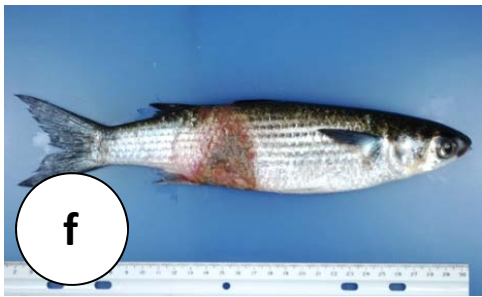
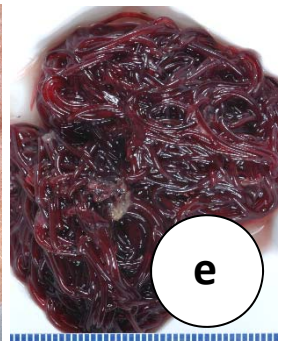
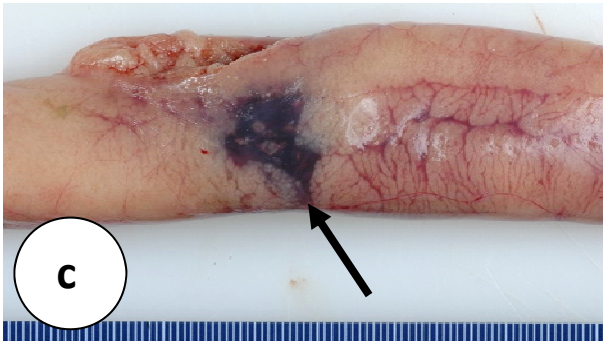
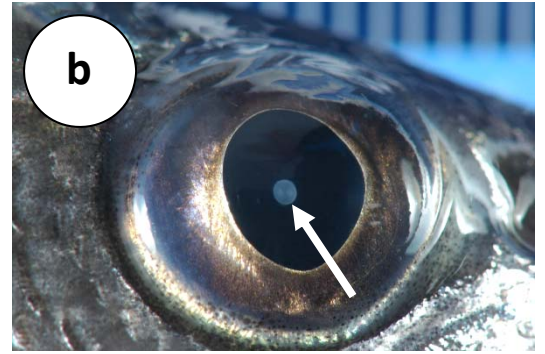


Factors affecting the health of aquatic animals





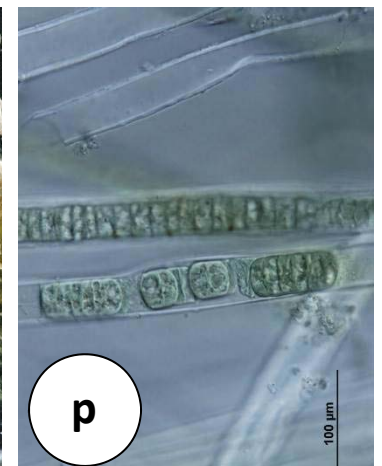
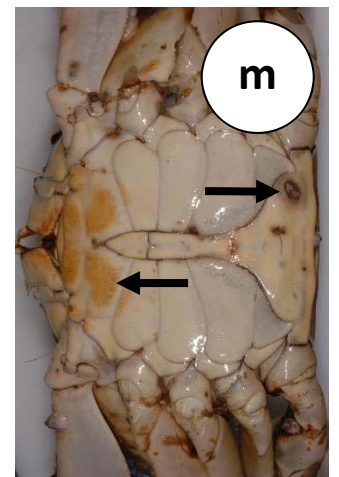
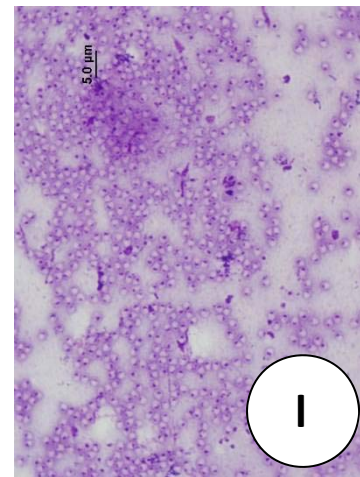
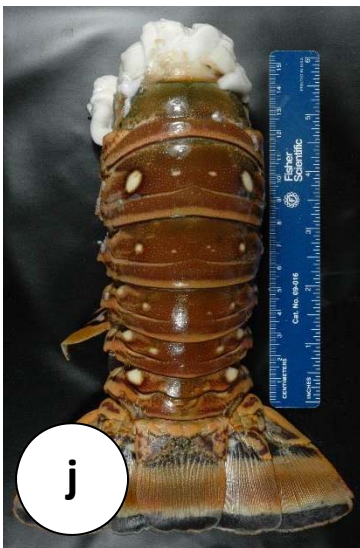
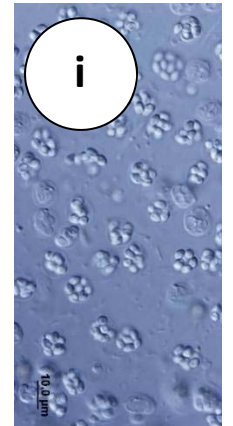
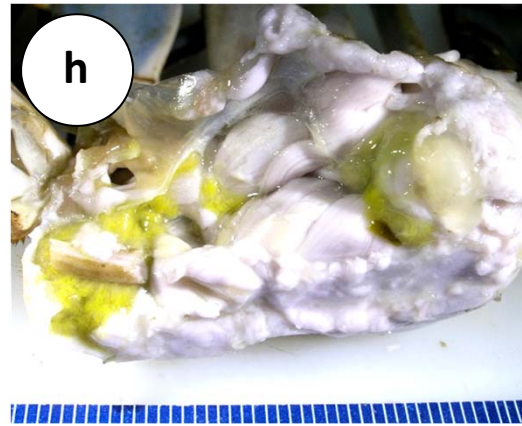
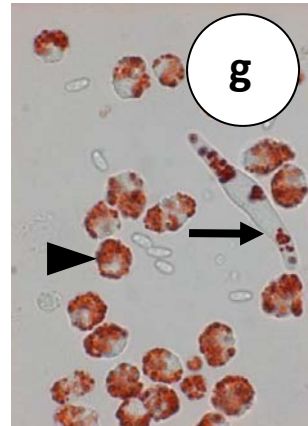
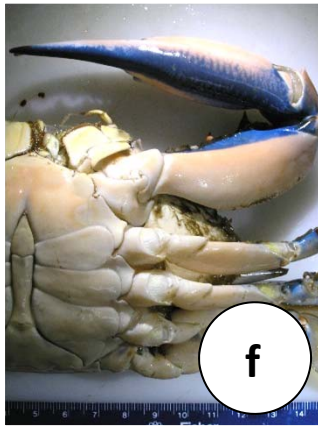
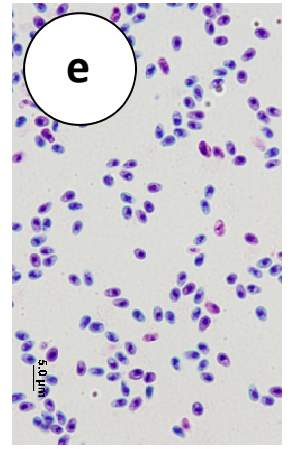
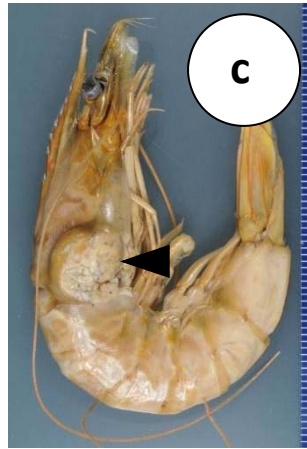
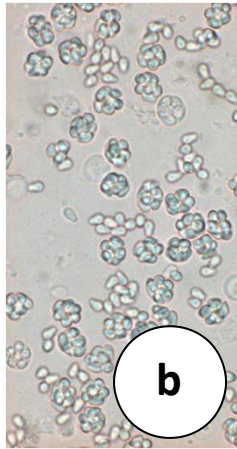
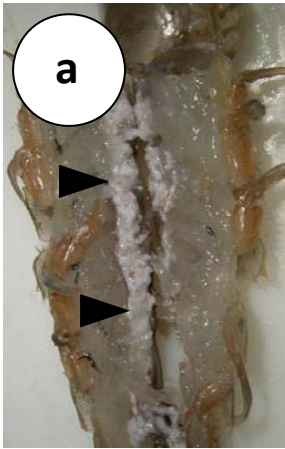


Figure 2. Example of fish diseases seen in wild and cultured conditions. (a) Red drum (*Sciaenops ocellatus*) juvenile from Stock Enhanced Research Facility (SERF), Port Manatee, with bacterial infection with *Vibrio harveyi* exhibiting clinical signs of frayed fins, scale loss, and emaciation. (b) Red drum juvenile with nuclear cataract (arrow) from SERF. (c – e) Red drum captured from wild having ovary (c) with Nematoda, *Philometra floridensis* infection (arrow); cut appearance shown (d); and the organisms isolated (e). (f – g) Striped mullet (*Mugil cephalus*) from Caloosahatchee River with Aphanomycosis (*Aphanomyces invadans*) exhibiting ulcerative lesion (f), and oomycete hyphae under tissue wet mount (g). (h) Atlantic menhaden (*Brevoortia tyrannus*) with Aphanomycosis. (i – k) Vermilion snapper (*Rhomboplites aurorubens*) exhibiting condition known as xenoma, microsporidia infection (arrow) at the caudal fin (i); cut appearance shown (j); and the tissue smear stained with Wobach Gieamsa stain showing spores (black arrow head), and host erythrocyte (white arrow head) (k). (l – n) Redfin needlefish (*Strongylura notata*) from the Indian River Lagoon with hematopoietic neoplasm (Lymphosarcoma) found at the jaw (l), pectoral fin base (m), and flank (n).

Figure 3. Example of invertebrate diseases seen in wild. (a – b) Pink shrimp (*Farfantepenaeus duorarum*) with microsporidiosis (*Agmasoma penaei*; arrow head) from the Indian River Lagoon; cut appearance of abdomen (a); tissue wet mount (b). (c – e) White shrimp *Litopenaeus setiferus* from Louisiana after DWH incident exhibiting with a large form of “tumor-like” nodule (arrow head) on right side of the carapace; cut appearance (d); smear stained with Diff Quik stain (e); note that this specimen was fixed/preserved with isopropanol. (f – g) Blue crab (*Callinectes sapidus*) with *Hematodinium*, pathogenic dinoflagellate infection in the hemolymph, showing pink coloration (f); hemolymph smear with neutral red stain demonstrate *Hematodinium* in amoeboid trophont (arrow head) and vermiform stages (arrow) (g). (h – i) Blue crab with cotton disease, microsporidia infection (*Thelohania* sp.) from Tampa Bay; cut appearance of the bisected body with muscle in totally chalk color (h); tissue wet mount with Nomarski optics (i). (j – l) Spiny lobster (*Panulirus argus*) with cotton disease, microsporidiosis (*Ameson* sp.) from southeast Florida (j) and Keys (k); the infection would not be known without removing the shell, but the muscle tissue is white at the anterior portion (j); Cut appearance of the abdomen showing the muscle tissue totally chalk color (k); smear stained with Diff Quik stain (l). (m) Blue crab exhibiting shell disease, caused by Chitinoclastic bacteria. (n – p) Sea fan (*Gorgonia ventalina*) with filamentous cyanobacteria infection from southeast Florida; Cyanobacteria heavily affected *Iciligorgia schrammi*, in situ (n); macrophotograph of formalin-fixed *Gorgonia ventalina* specimen with attached cyanobacteria (o); wet-mount Nomarski micrograph of Oscillatoriales sample (p).

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THE ASSOCIATED PRESS / Thursday, April 19, 2012, 1:13 PM

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By CBS NEWS STAFF CBS/AP April 19, 2012, 1:03 PM

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This 2012 photo shows a fish harvested from the Gulf of Mexico with unusual lesions and infections.

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By DAILY MAIL REPORTER

PUBLISHED: 17:04 EST, 19 April 2012 | UPDATED: 01:07 EST, 20 April 2012

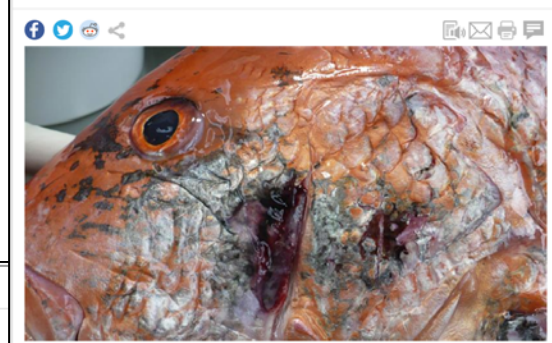
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By Chelsea Harvey, Washington Post

Monday, October 26, 2015 12:54pm

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