# Diseases of finfish

# Viral diseases—Channel catfish virus disease

# Signs of disease

Important: animals with disease may show one or more of the signs below, but disease may still be present in the absence of any signs.

### Disease signs at the farm level

high mortality in fry and juvenile catfish

### Disease signs at the tank and pond level

mortality

# Clinical signs of disease in an infected animal

- ascites (swollen abdomen from accumulated fluid)
- exophthalmus (pop eye)
- haemorrhaging of fins

# Gross signs of disease in an infected animal

- haemorrhaging of muscle
- extensive necrosis of renal tubules and interstitial tissues of the kidney

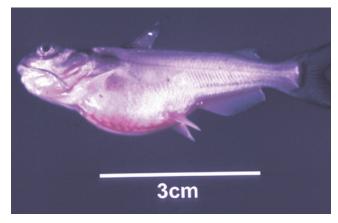
### **Disease agent**

Channel catfish virus disease (CCVD) is caused by a herpesvirus (Ictalurid herpesvirus 1)

#### **Host range**

Fish known to be susceptible to CCVD:

blue catfish\* (Ictaluris furcatus) channel catfish\* (Ictaluris punctatus) white catfish (Ictaluris catus)

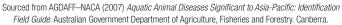


CCVD-affected channel catfish fingerling. Note swollen stomach and 'pop eye'

Source: L Hanson

<sup>\*</sup> naturally susceptible (other species have been shown to be experimentally susceptible)





#### **Channel catfish virus disease continued**

#### Presence in Asia-Pacific

EXOTIC — has not been officially reported in the Asia–Pacific region under the NACA–FAO–OIE quarterly aquatic animal disease reporting program.

### **Epidemiology**

- Horizontal transmission occurs directly from virus shed in water, and from virus carried by animate vectors and on fomites.
- Vertical transmission is believed to be common. However, because no infectious virus has been found on the skin or sexual products at spawning, this mechanism has not been proven.
- Survivors of CCVD remain covert carriers of the virus.
- Susceptibility appears to vary according to the strain of channel catfish.
- Although older fish are susceptible to outbreaks of the CCVD, the disease occurs almost exclusively in fish that are less than one year old, and generally in fish less than four months old.
- Mortality is highest where water temperature exceeds 27°C, but decreases with temperature and ceases at 18°C.

## **Differential diagnosis**

The differential diagnostic table and the list of similar diseases appearing at the bottom of each disease page refer only to the diseases covered by this field guide. Gross signs observed might well be representative of a wider range of diseases not included here. Therefore, these diagnostic aids should not be read as a guide to a definitive diagnosis, but rather as a tool to help identify the listed diseases that most closely account for the gross signs.

#### Similar diseases

Enteric septicaemia of catfish

#### Sample collection

Because of uncertainty in differentiating diseases using only gross signs, and because some aquatic animal disease agents might pose a risk to humans, you should not try to collect samples unless you have been trained. Instead, you should phone your national hotline number and report your observations. If samples have to be collected, the agency taking the call will advise you on what you need to do. Local or district fisheries/veterinary authorities could advise you on sampling.

### **Emergency disease hotline**

For your national emergency disease hotline number, see Whom to contact if you suspect a disease.





### **Channel catfish virus disease continued**

# **Further reading**

http://www.oie.int/aac/eng/cards/en\_diseasecard.htm

The currently accepted procedures for a conclusive diagnosis of CCVD are summarised at http://www.oie.int/eng/normes/fmanual/A\_00023.htm

These hyperlinks were correct and functioning at the time of publication.



