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IRIDOLOGY METHOD FOR DETECTING EFFECT OF WATER QUALITY AND STRESS IN FISH

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ABSTRACT

The research about Iridology Method for detecting effects of water quality and stress was carried out in 2004-2012. Iridology method is using iris from eyes coral reef fishes and freshwater fishes. Iris sensitive to environmental condition like pollution, parasites and stress as effects of decrease water quality. The objectives of the research are introduce iridology methods as effective methods for detect effects of decrease water quality and stress in fish. The results of the research since 2004 until now are get new information about respons iris of eyes in fish to pollution or decrease of water quality, parasites and stress in fish. Iris of eyes fishes are responsive and show the effects with changing color of iris and position according effects in body of fish. Overall treatments are give respons in iris of eyes coral reef fishes and freswater fishes. Respon coral reef fishes eyes found in 11-13 o'clock position and respons in freswater fishes found in 5-7 o ' clock position. Both respons of iris fishes make up pattern according environmental condition have influence the body of fishes. This method is useful for guidance health fishes in aquatic culture or natural waters condition from pollution or decrease water quality, parasites and stress in fish.

Keywords: Iridology Method, Water Quality, Stress in Fish

INTRODUCTION

An iris contains a very large number of delicate fibers; these fibers react to the body's metabolism in a predictable pattern. How does Iridology work Work? Iris marks are formed due to the eye's unique relationship with the brain. The iris is an extension of the brain endowed with many thousands. The Iridology methods is performed by dividing each image of the irises into seven concentric areas with the pupil in the center.

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The areas are then further divided into 45 sections, which associate with specific body organs. Iridology methods is a diagnostic process that helps indicate organ conditions with an accuracy rate of between 80 percent and 90 percent. Tests can be done to support the diagnosis and, based on the lab test, treatment can be performed. The analysis is not intended to detect specific illnesses, but it will only help identify organs' current condition, weaknesses and those associated with inherited diseases. For example, stress is reflected with several rings on the border of the iris; people with high cholesterol, meanwhile, have a thick whitish ring on the iris' border.

Today, the iridology methods is not only for human health but also for cat, dog, equine and fishes (coral reef fish and freshwater fishes). The Iridology methods can analyze condition eyes animals, we can call Animals Iridology. In addition for fish, we call Fish Iridology for detected body and water quality condition. In Coral reef fisheries, fisherman always *potassium cyanide* (KCN) for many catch coral reef fishes. It is essential problems and difficult to check of exposure KCN in body coral reef fishes. Iridology method is one solution for detect KCN and give proof exposure KCN in body fish. This method use iris as tools for show change body condition in fish. Iris can reflect and show chemical or change water quality in body fish especially in eyes. The iris records information about the state and functioning of every organ in the body.

METHOD

Several samples coral reef fishes from Chaetodontidae family and freswater fishes from Cyprinidae (*Catasstrus auratus* and Cyprinus). KCN exposure for check effect pollution in water, cutter and ruler for open lession and parasite infection from Hampala aquaculture from lake Singkarak. The method used in this study is the experimental method, photography iridologi, histotehnik and open observations. Experimental method is a treatment trial to study the response of the iris against the poison of potassium (KCN). After that , the iris of fishes photography is capturing an image slices before and after treatment. Having made the observation that objects such as fish *Chaetodon lunula, Chaetodon vagabundus, Chaetodon altivelis, and Chelmon rost*ratus. The fish is placed in the aquarium for acclimatization for 3 days. After the irises were examined in order to know absolutely normal that qualifies for

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potash treated toxins. Normal iris color is usually clear or translucent yellow-greenish white fish such as *Chelmon rostratus*. Fish sense of the leadership monyong after acclimatization for 3 days taken three tails. Third fish monyong leadership-leadership in the left and right eye images. After that, all three fish are treated the wound with a 1 cm long slit with a knife cutter in the middle of the body left, the right body to normal without treatment of wounds. After three days and then photographed observed irises back to iris observation. Treatment of cyanide poison administered by the fish on the move from the acclimation aquarium and put in a bucket. Eyelets first photographed, then given 20 ml of poison cyanide 4 ppm and 20 ppm cyanide poison in the left eye and right eye. The provision made for 1 minute by 20 ml of potas poison in the field by a fishing reef. Doses of potassium toxin in the field of ornamental reef fish for 4 ppm and 5 ppm for reef fish like grouper economical, Beronang and Snapper. After such treatment was made with three replications. The freshwater fishes (mas koki) take in aquarium, after that the aeration of oxygen is stopped. Tomorrow, the iris of freshwater fish is observed for detected iris condition.

RESULTS AND DISCUSSION

The results of the research since 2004 until now are get new information about respons iris of eyes in fish to pollution or decrease of water quality, and stress in fish. Iris of eyes fishes are responsive and show the effects with changing color of iris and sign position according effects in body of fish or changing water quality. Figure 2 explain and show about sign position according potas effects (KCN) in body of fish. Effect potas affect fish health and welfare. This statement is according some experts. Stressful conditions can also affect fish health and welfare (Barton, 2000; Barton and Iwama, 1991). Environmental and husbandry stressors weaken both the innate and adaptive immune responses of the fish against pathogens (Klesius *et al*., 2001). Due to these, stress coping style or "*the coherent set of behavioral and physiological stress responses, which is consistent over time and a characteristic of a certain species*" (Koolhaas *et al*., 1999), is of fundamental importance to the quality of life of a cultured species.

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These results confirmed the initial assumption that the influence due to injury or interference with the body parts of fish followed the pattern of the human iris. Open lesion that appeared after 3 days in the form of a yellowish black marks on the axis of the spine and the nerves and the midsection. For freswater fish like Cyprinus sp the sign in iris is risen after 24 hours. Position open lesion found marks on the iris of fish a sense of the leadership with the human iris are relatively equal (Jensen, 1982). This indicates there is a common response of fish iris *Chaetodon rostratus* leadership and sense like the human iris.

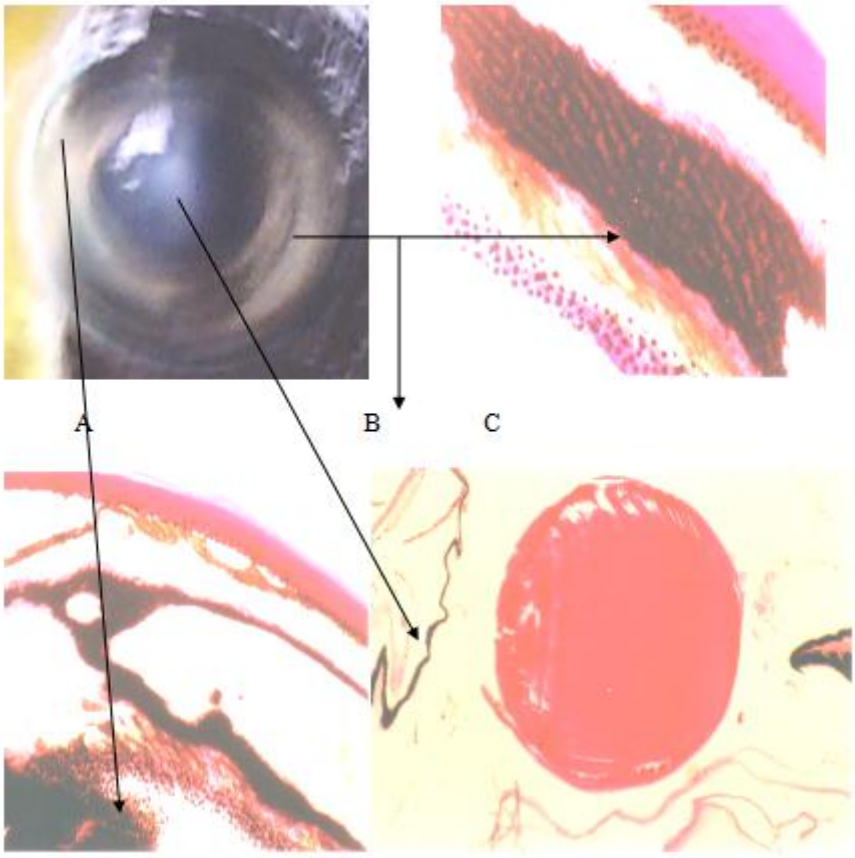

Figure 1. A) Cross Section Iris with Red Area in Kepe Gajah (*C.lunula*) is Treatment Potas B) Cornea Exposure of Potas, C) Iris and Eyes Lens with Potassium exposure
(Razak, 2005)

Figure 1 above indicate, the iris of salwater fishes is responsive to exposure of potas and open lesion treatment in the body. The exposure of potas poison can found in

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iris and eye tissue of salwater fishes. In addition, exposure of potas poison is found in cornea. This results indicate the iris use for detect changing water quality and pollution. The darkening in position 11-13 hours is facts mas koki fishes (*Catassius auratus*) stress. The iris of fishes are sensitive to change of water quality. Iris of fishes can show stress, low oxygens, effect pollution, open lession in body or respons degradation of internal organ like gill, brain, digestive organs and parasite infection. The objectives of the research are checking effectiveness iridology methods as effective methods for detecting effects of decrease water quality and stress in fish. Iris of eyes fishes are responsive and show the effects with changing color of iris and position according effects in body of fish or changing water quality.

CONCLUSION

Iridology methods as effective methods for detect effects of decrease water quality and stress in fish. Iris of eyes fishes are responsive and show the effects with changing color of iris and position according effects in body of fish or changing water quality.

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