MARKING AND TAGGING METHODS APPLIED TO EEL (ANGUILLA ANGUILLA L.)

Jan Nielsen

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Jan NIELSEN

County of Vejle, Water Department, Damhaven 12
DK-7100 Vejle, Denmark

ABSTRACT. — Tagging or marking of eels often results in tag loss, infection, stunted growth or mortality. The main reason for this is considered caused by the ecology of the eel, hiding in bottom material etc. Most experiments have been performed *in situ*, thus making final conclusions on tag loss, growth and survival difficult.

Marking of eels are reported using different methods :

Submersion in colour bath (Nile blue sulphate, Alizarin, Methylen blue, Trypan blue, Gentiana violet, Janus green, Lithium-carmin, Neutral red and Bismarck brown).
Submersion in tetracycline bath.
Injections of tetracycline, rubber latex, acrylic paint, Alcianblue and Indian Ink.
Cauterization using silver nitrate and concentrated sulphuric acid.
Freezing using liquid nitrogen.
Burning using a red hot piece of metal.
Fin clipping.
Labelling with radionucleotides.

Tagging of eels were done using :

External tags (Carlin tags, Floy tags, other related tags, jaw tags, plastic arrow tags, gill tags).
Internal tags introduced to the body cavity.

All methods tested affect the eel, especially the tagging methods. Some methods have proven unfit for use, but as tagging and marking of fish are valuable tools in fisheries investigations the following methods can be recommended to be tested further :

Tagging methods :

Carlin tags (including different types of wire), Floy tags, Jaw tags, internal tags.

Marking methods :

Submersion in coulour bath, Injection of rubber latex, Injections of alcianblue, Cauterization using silver nitrate pencils, Freezing, Fin removal.

Testing should not involve silver eels.

OTOLITHS OF EELS OF KNOWN AGE

Inge BOËTIUS

Danmarks Fisheri- of Havundersogelser,
Charlottenlund slot, 2920 Charlottenlund, Denmark

ABSTRACT. Otolith photos of eels ranging from leptocephali to 18 months eels (after glaseel stage) are presented. The otoliths of glasseels from four European localities were of nearly equal size. Eels of known age from an eel farm showed that the otoliths continue their growth even if the fish itself does not grow at all. This is also true during the metamorphosis from leptocephalus into glasseel, where the body length is reduced. The farmed eels, which were of known age showed in their otoliths a number of rings which indicate a much higher "age" than the actual age.