

Weever fish envenomation - analysis of enquiries to the Poisons Information Centre Erfurt from 1994-2013

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Objective

Weever fish (9 species in 2 genera) have poisonous spines on their first dorsal fins and gills (Fig. 1) and are mostly restricted to the eastern Atlantic and the Mediterranean Sea. Although only one (Mecklenburg-West Pomerania) of four federal states the Poisons Information Centre (PIC) Erfurt is serving borders on the Baltic Sea, the PIC Erfurt receives several enquiries every year about weever fish envenomations.

Methods

In a retrospective study the yearly frequencies, symptoms, age groups, and regions of weever fish envenomation related enquiries to the PIC Erfurt from the beginning of 1994 to the end of October 2013 were analysed.

Results

In total, 44 weever fish envenomations without tendency were registered (yearly mean 2.2, range 0 to 7) (Fig 2). Adults (90.9%) were more often stung by weever fish than children (9.1%) and males (68.2%) more frequently than females (22.7%).

Typically, weever fish envenomations occurred in holidays during leisure time activities like wading through shallow water, swimming or fishing. Main regions of weever fish envenomation were the Mediterranean Sea (10/44), the Atlantic Ocean (7/44), and the North Sea (3/44).

Only two cases of weever fish envenomation were reported from the Baltic Sea. The PIC Erfurt was contacted mostly a few days after envenomation (median: 6 days) and continuing symptoms were always reported.

Most frequent symptoms were local pain (18/44), swelling and oedema (22/44) in hands (18/44) or feet (9/44) sometimes affecting the whole limb, and undefined local reaction (8/44). Cardiovascular symptoms were collapse (2/44), tachycardia (1/44), and hypotension (1/44). In one case, wound healing was complicated by a persisting sting and in another by an erysipeloid reaction.

In five cases, treatment of weever fish envenomation included hot water immersion (not recommended by the PIC Erfurt) and was mostly supportive like wound disinfection, assessment of tetanus vaccination, administration of analgesics, antihistamines, glucocorticoids, and antibiotics.

Case report (Fig. 3)

- Patient: 73-year-old man
- Anamnesis: was stung by something unknown in July 2013 near Wismar (Baltic sea) during wading through shallow water.
- Clinical features: 12 hours later fever ($> 38^{\circ}\text{C}$) and pain in the right toe. One day later at the hospital, a erysipeloid skin reaction with pain and starting lymphangitis of the right toe was seen.
- Diagnostic: in blood cultures no pathogen could be detected.
- Treatment and course: wounddebridment and antibiotic therapy with infusion of ampicillin/sulbactame for 5 days was performed. Impaired wound healing over 5 month was observed.

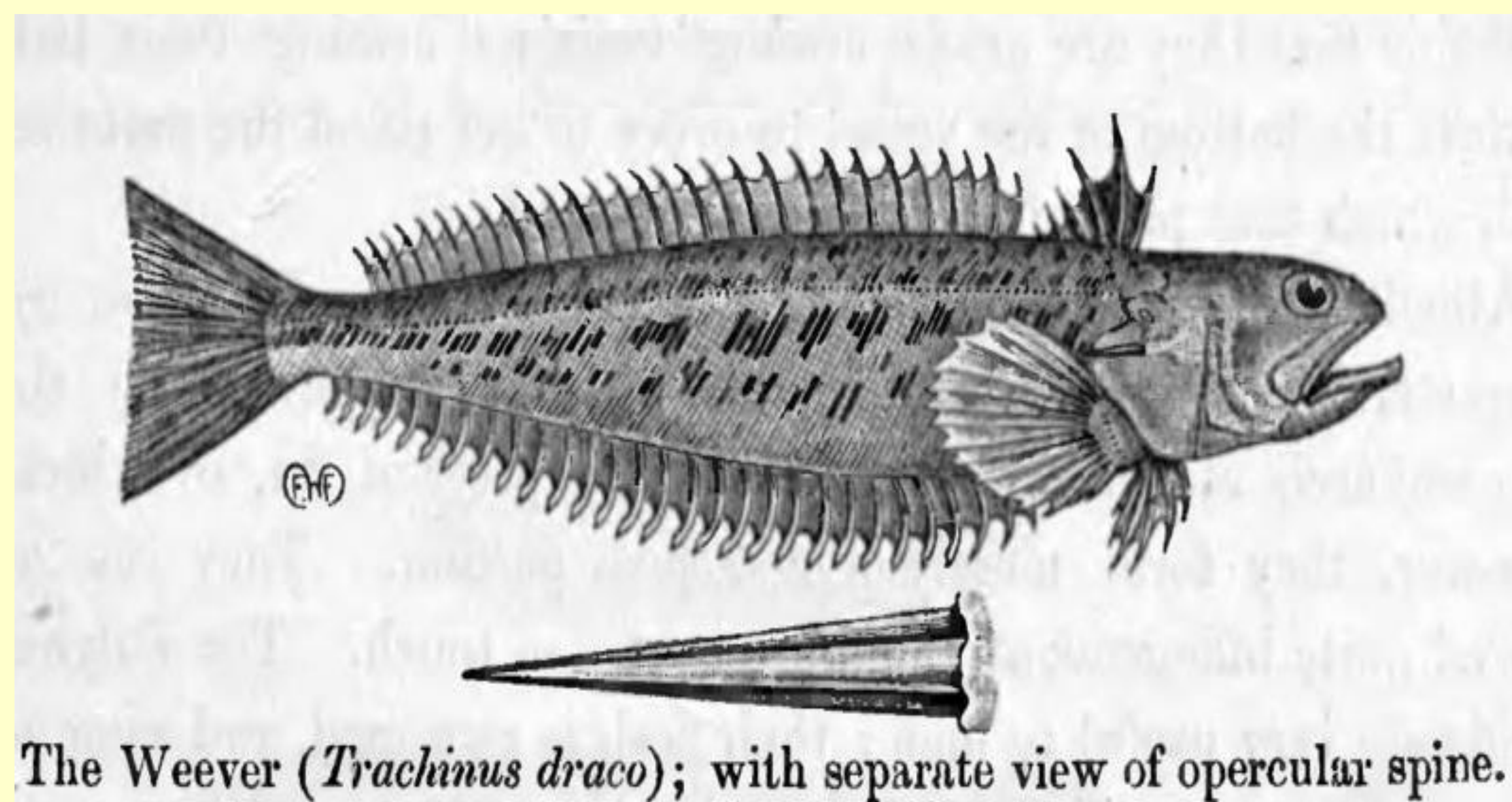


Fig. 1 <http://commons.wikimedia.org/wiki/File:TrachinusDraco.jpg>

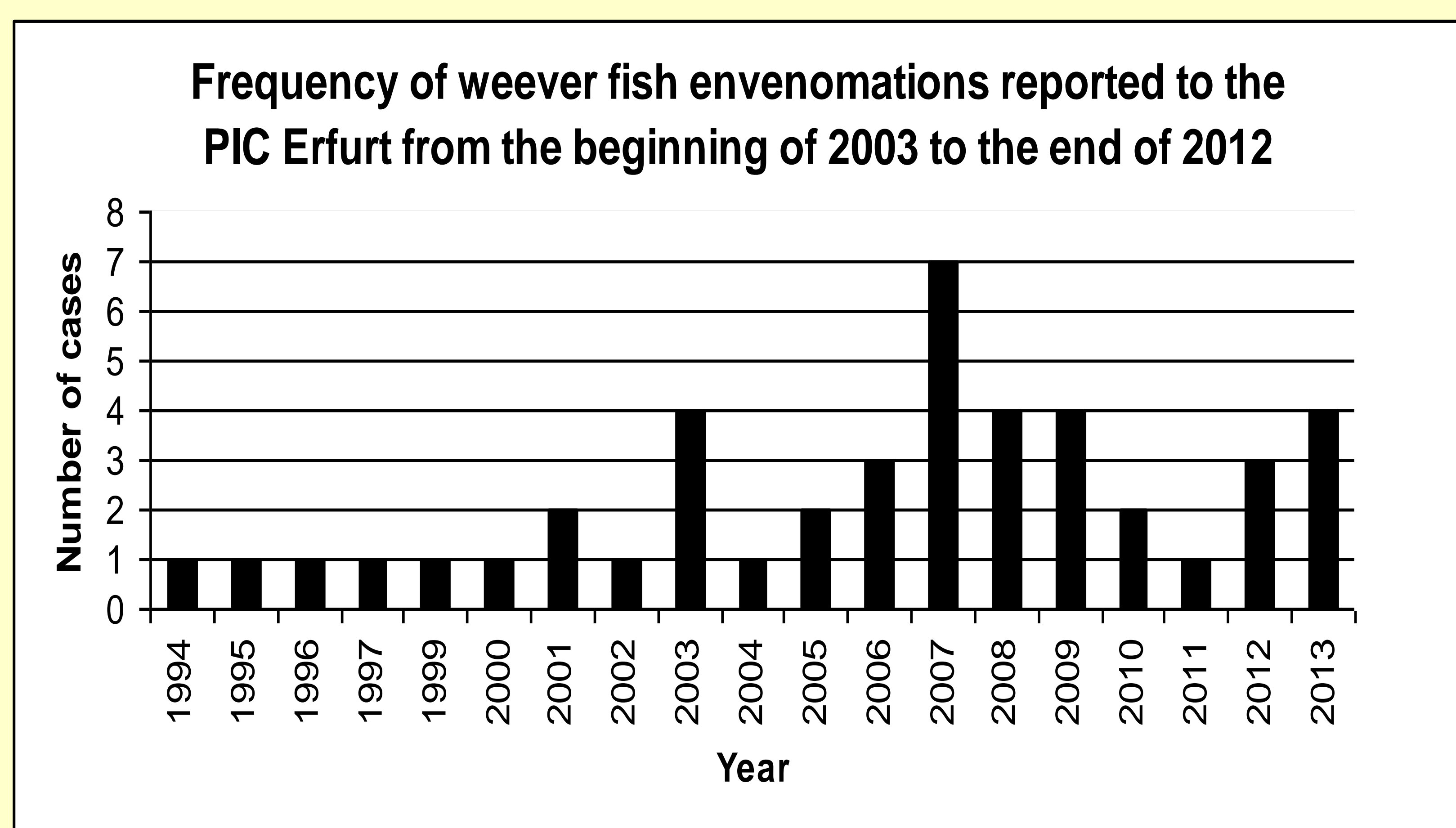


Fig. 2 Frequency of weever fish envenomations reported to the PIC Erfurt from the beginning of 2003 to the end of 2012.



Fig. 3 Time course after a possible case of weever envenomation

Conclusion

- Mainly due to tourism, the PIC Erfurt received several enquiries per year about weever fish envenomation.
- Mostly, hands and feet were affected during swimming and fishing and symptoms lasted for few days.
- No evidence based treatment of weever fish envenomation exists. Complications of wound healing are persisting stings or secondary infection.