

Why do weever fish make beach visits a painful experience?

August 24 2018, by Alan Williams



Weever fish might appear small and unremarkable but spines on the dorsal fin and head can release powerful venom. Credit: University of Plymouth

Scientists from the University of Plymouth are carrying out research into one of the more painful features of the South West's beaches – weever fish.

At first glance, the small, beige-coloured creatures are unremarkable, spending much of their time buried in sand. But when stepped on or handled, the spines on the [dorsal fin](#) and head can release powerful

venom.

With the summer holidays now almost at a close, there has been a spike in reports across Devon and Cornwall of people being stung.

Marine biologists and coastal scientists from the University are joining forces to expand our knowledge of why weever [fish](#) tend to inhabit certain areas, what they do in these areas and what factors make a sting more likely.

They also hope that by establishing their habitat needs, natural influences and human impacts on weever fish populations can be anticipated.

Dr Benjamin Ciotti, Lecturer in Marine Biology, is working with students to conduct the research. He said:

"Weevers are small fish with a big reputation but we still don't know much about them. Our students are generating valuable new insights into the ecology of the species, including what types of beaches support weevers and promote stings. These notorious little fish can't be blamed for defending themselves, but we do hope that our research will help reduce the risks of getting stung."

A number of students in [marine biology](#) are involved in the research, including PhD researcher Anna Persson and undergraduates Shane Griffin and Matthew Haynes.

They are conducting regular sampling at 17 beaches across Devon and Cornwall, using small nets to document where the weever fish are living.

By working with the University's Coastal Process Research Group, they can then match that data with detailed physical measurements, such as wave conditions, to establish how the characteristics of beaches

determine the distribution of weever populations.

Samples are also being examined back at the University to assess the fishes' feeding, growth and venom properties.

Shane Griffin, who is about to start the third year of the BSc (Hons) Marine Biology programme, added:

"Despite a fearsome reputation with bathers and fishermen for causing painful injuries, weever fish are relatively unstudied as a group. It was this lack of knowledge and the opportunity to contribute something tangible to our understanding of weever fish and their ecology, which initially attracted me to the current project. The information we obtain from this study will have real practical application in helping predict when and where weever fish are most likely to occur and thereby managing our interactions with them."

Provided by University of Plymouth

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