

# Gymnodinium catenatum

## SYSTEM

Marine

## COMMON NAMES

English: naked dinoflagellate, estuarine dinoflagellate, chain-forming dinoflagellate

## DESCRIPTION

*Gymnodinium catenatum* is a toxic, bloom forming species of microalgae. It is usually seen in long, swimming chains of tiny cells, with up to 32 cells in a chain (occasionally 64). It is also seen as solitary cells with a green-brown colour. The size of these cells ranges from 38 - 53 um long and 33 - 45 um wide. The cells are circular to squarish in shape, with many rounded organelles within them. Cysts of *G. catenatum* are brown, spherical and range in size from 45 - 50 um in diameter.

## KNOWN INTRODUCED RANGE

ASEAN: Philippines, Singapore

WORLD: Argentina, Baha De La Paz, China, Cuba, Iberian Coastal, Japan, Korea, Republic Of, Mexico, Pacific-Eastern Central, Portugal, Spain, Venezuela, Australia, Brazil, Costa Rica, Hong Kong, Italy, Korea Democratic People's Republic Of, Mediterranean and Black Sea, New Zealand, Uruguay

## PATHWAY

Transport – Ship/boat Ballast Water  
Aquaculture and Fisheries

## REASON FOR INTRODUCTION

Ballast water can transport this organism long distances to new environments. Cysts of *G. catenatum* can be accidentally translocated through aquaculture and fisheries activities, such as in oyster cages or on mussel ropes.

## IMPACTS

Toxins (saxitoxins and gonyautoxins) produced by *Gymnodinium catenatum* can cause Paralytic Shellfish Poisoning (PSP). Mussels, oysters and scallops from areas affected by *G. catenatum* blooms have been highly contaminated with paralytic shellfish toxins, resulting in human poisonings (NIMPIS, 2002c).

Source: Global Invasive Species Database (GISD) 2015. Species profile *Gymnodinium catenatum*. Available from: <http://www.iucngisd.org/gisd/species.php?sc=645> [Accessed 09 September 2019]

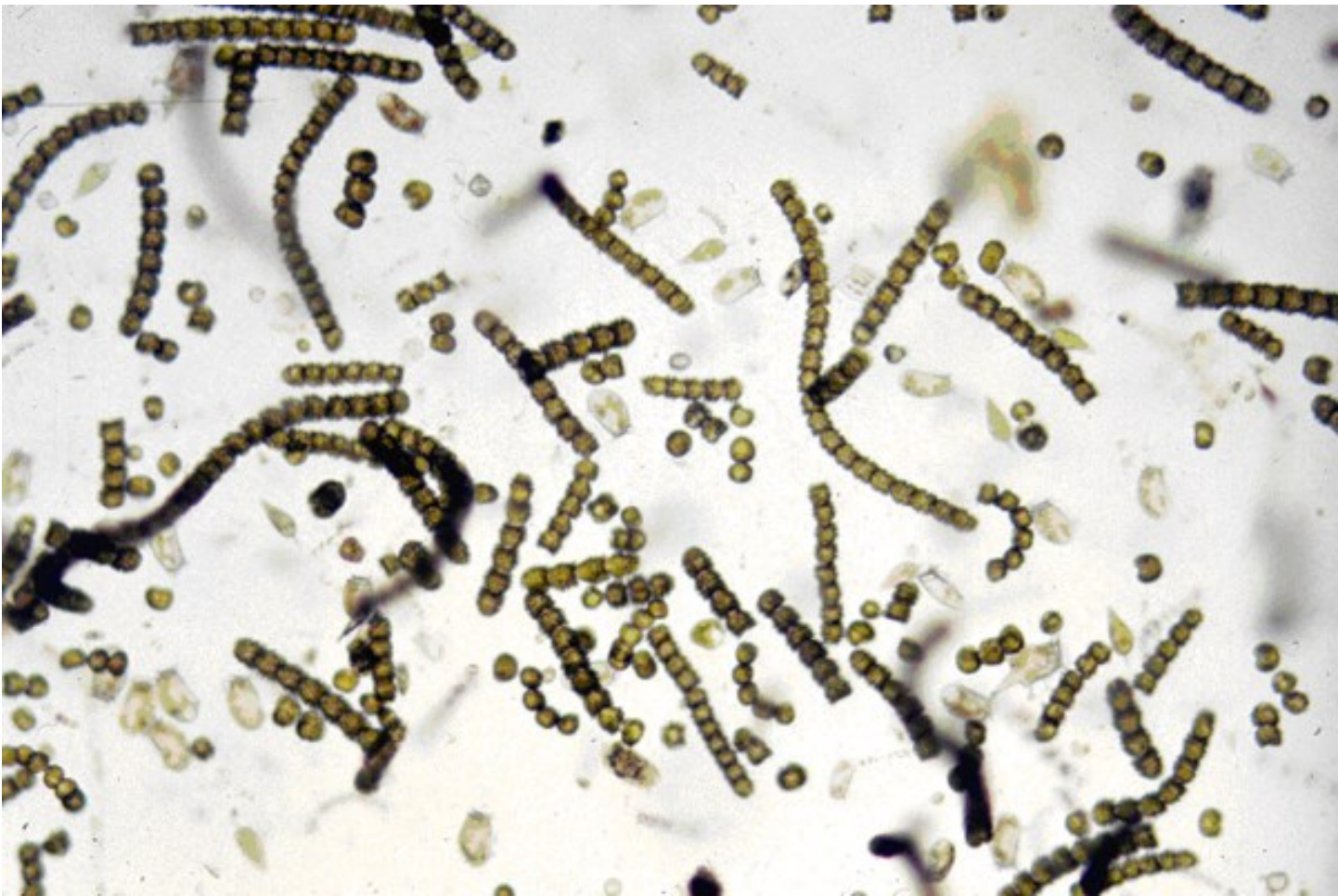


Photo by Christopher Bolch accessed at <https://www.cabi.org/isc/datasheet/107772#tosummaryOfInvasiveness> on 12 September 2019