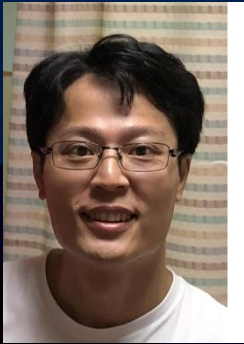


# 蔡昇芳 助理教授 海洋原生生物研究室



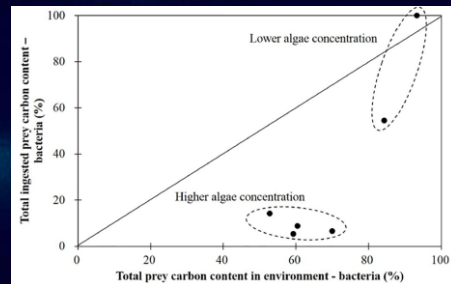
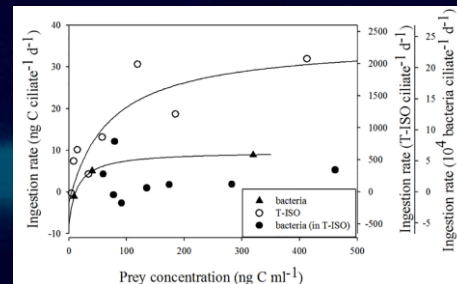
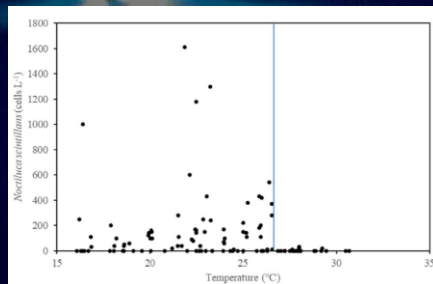
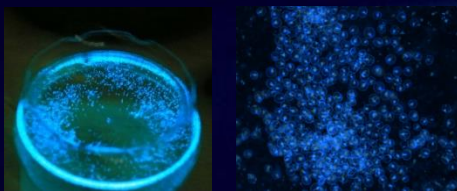
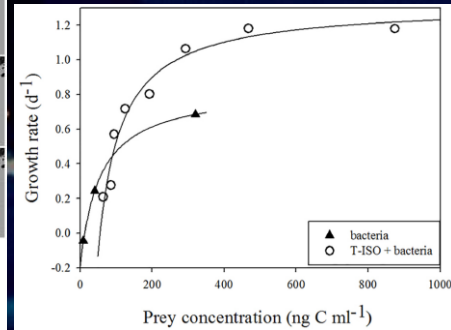
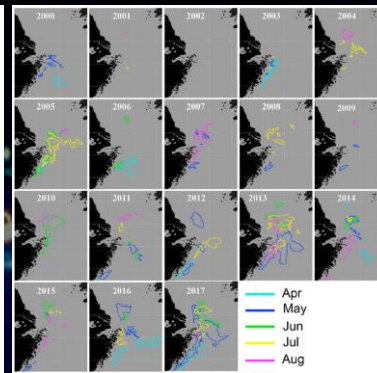
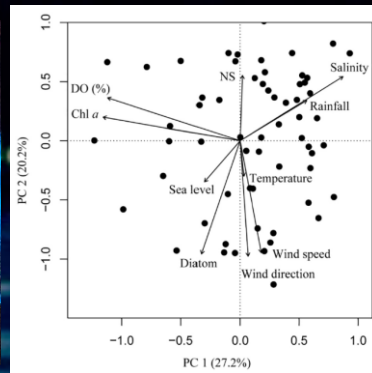
學歷：國立臺灣海洋大學 環境生物與漁業科學學系 理學博士

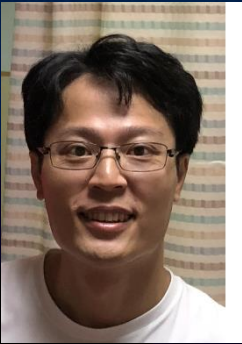
經歷：國立臺灣海洋大學 海洋中心助理研究員  
國立臺灣海洋大學 海洋環境與生態研究所助理教授

研究領域：海洋生態學、原生生物學、纖毛蟲分類與生態、夜光蟲生態學

## 研究內容：

- 研究馬祖沿近海夜光蟲(藍眼淚)生物量之變動與海洋生地化間之關係，包括夜光蟲成長、攝食、生殖等族群動態相關研究。
- 持續累積臺灣沿近海纖毛蟲種類鑑定之背景資料，作為解析臺灣沿近海纖毛蟲之時空分布結構，以及其鏈結海洋微生物循環與海洋傳統食物鏈之重要性，藉以做為臺灣沿近海碳傳遞之基礎資料。





# Sheng-Fang Tsai, Assistant Professor

## Laboratory of Marine Protozoa

### Education :

- Department of Environmental Biology and Fisheries Science, National Taiwan Ocean University (Ph.D.)

### Professional experience :

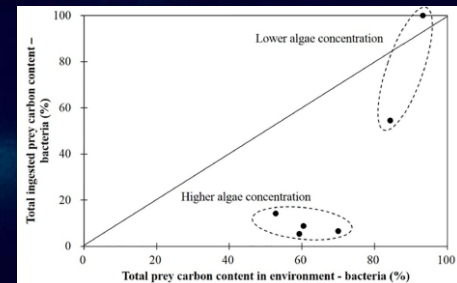
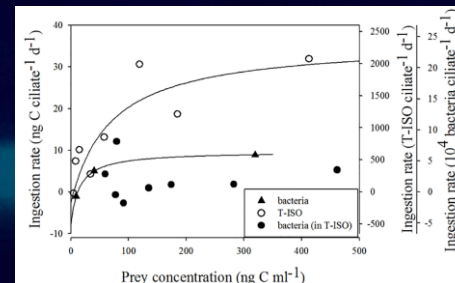
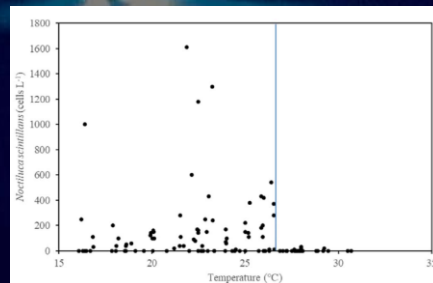
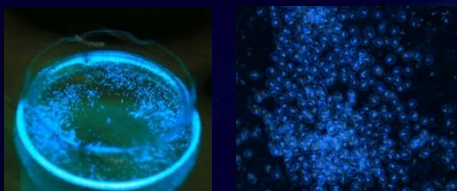
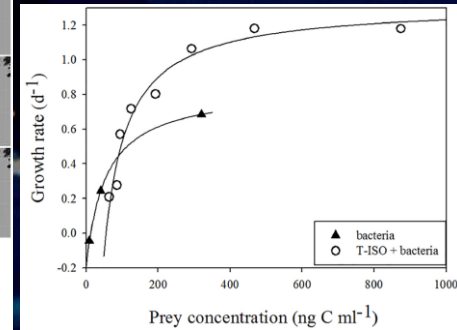
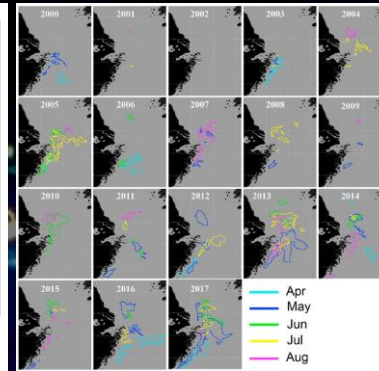
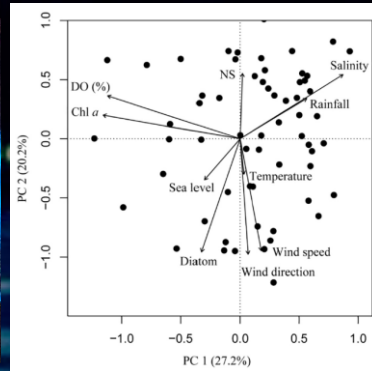
- Assistant Research fellowship, Center of Excellence for the Oceans, NTOU
- Assistant Professor, Institute of Marine Environment and Ecology, NTOU

### Expertise :

Marine ecology, Protozoa, Taxonomy of Ciliate, Ecology of Marine Ciliate and *Noctiluca*

### Research interest :

- Research on the relationship between *Noctiluca scintillans* (Blue tears) and biogeochemical parameters in the water off Matsu archipelago, its growth rates, grazing rates, and reproduction, as well as population dynamics.
- Accumulation of a data base for the taxonomy of marine oligotrich ciliates off the coastal waters of Taiwan to analyzing the composition of marine oligotrich ciliates and its spatial and temporal distribution, and to detecting the important link between the marine microbial loop and the traditional grazing food chain, as the dynamics of carbon transference.





# Neglect of Presence of Bacteria Leads to Inaccurate Growth Parameters of the Oligotrich Ciliate *Strombidium* sp. During Grazing Experiments on Nanoflagellates

Wan-Lin Chen<sup>1</sup>, Kuo-Ping Chiang<sup>1</sup> and Sheng-Fang Tsai<sup>1,2\*</sup>

<sup>1</sup> Institute of Marine Environment and Ecology, National Taiwan Ocean University, Keelung, Taiwan, <sup>2</sup> Center of Excellence for the Oceans, National Taiwan Ocean University, Keelung, Taiwan

## 忽略細菌的存在造咎了纖毛蟲攝食鞭毛蟲下的成長及攝食率

陳琬琳<sup>1</sup>、蔣國平<sup>1</sup>、蔡昇芳<sup>1,2\*</sup>

1. 國立臺灣海洋大學海洋環境與生態研究所
2. 國立臺灣海洋大學海洋中心

## 重要研究成果

- 在海洋微生物循環圈裡，傳統上認為纖毛蟲是以鞭毛蟲為餌料，但是該文章利用培養實驗發現當環境中鞭毛蟲數量很低時，纖毛蟲的餌料有超過50%反而是來自於細菌。
- 此結果有助於釐清鞭毛蟲與纖毛蟲之間的能量傳遞。

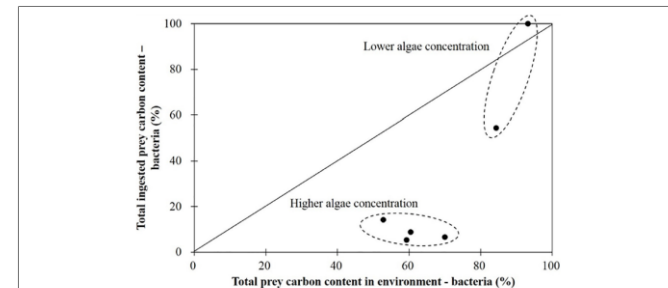


FIGURE 4 | Percentage of total ingested prey carbon content of bacteria when grazing on the haptophyte *Isochrysis galbana* (in the presence of bacteria). The diagonal line means 1:1.

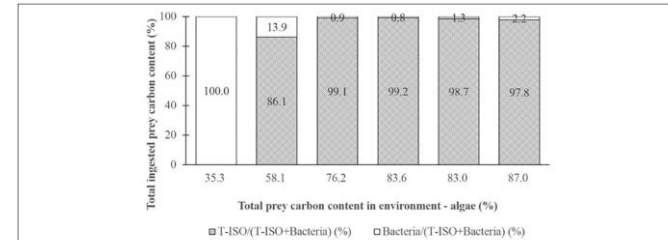


FIGURE 6 | Percentage composition of total ingested prey carbon content for *Strombidium* sp. under the first culture condition (grazing on haptophyte *Isochrysis galbana* (T-ISO), in the presence of different proportions of bacteria) (calculated with a bacteria cell carbon content of 20 fg C cell<sup>-1</sup>).