

Hydroids from Guinean Bissau waters (north-west Africa)

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INTRODUCTION

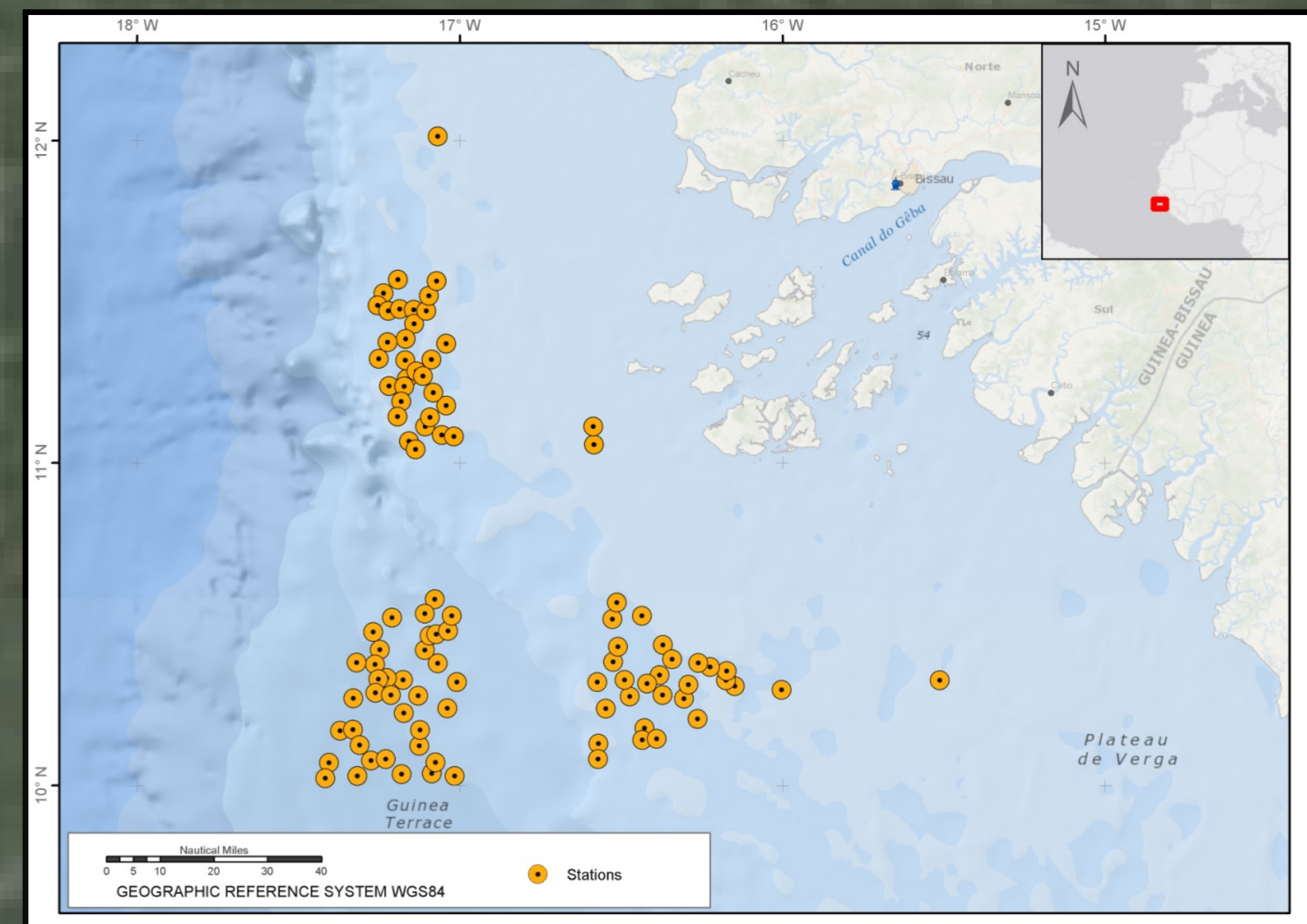
Guinea-Bissau is located in the confluence of two major ecosystems, the Guinea Large Marine Ecosystem (GCLME) in the South and the Canary Current Large Marine Ecosystem (CCLME) in the North (Jiménez *et al.*, 2015). This area harbours important upwelling phenomena and it is under the influence of the seasonal displacement of the thermic front between Cape Blanc (Mauritania) and Cape Verga (Guinea) that enhances the biodiversity. In addition, along the continental margin of this area the temperate North Atlantic biota is replaced by the tropical Atlantic species (van Soest, 1993).

Despite the faunistic and zoogeographical interest of this region, the benthic hydroids of Guinea-Bissau remains poorly studied: Vervoort (1959) identify 20 species collected during the Danish Atlantide expedition, and Gili *et al* (1989) reported 31 species sampled captured during a Spanish fisheries surveys.

The aim of this work is identify the hydroids obtained during the Spanish-Guinea Bissauan survey (BISSAU-0810) and analyze their strategies for colonizing soft-bottoms and their zoogeographical affinities.

MATERIAL AND METHODS

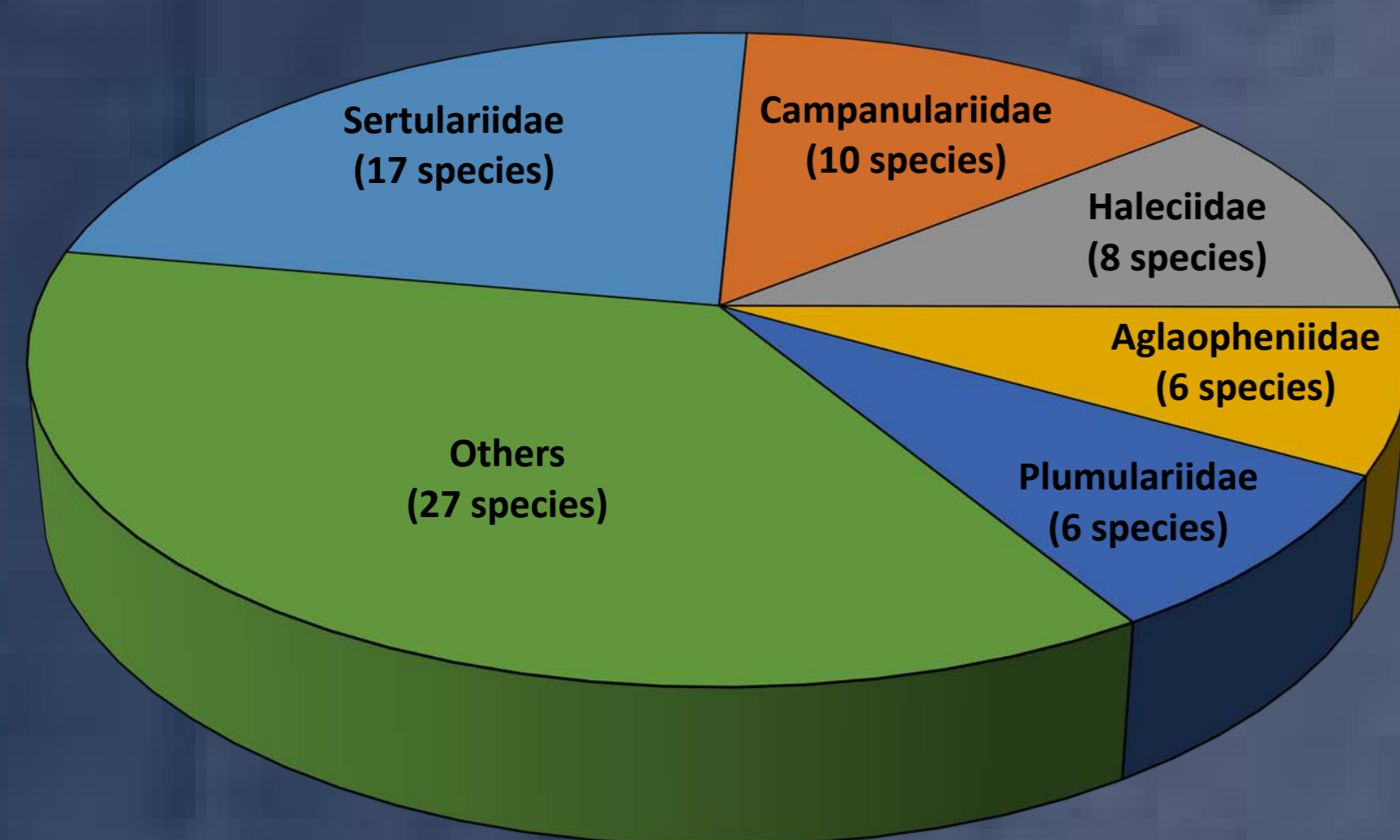
The material was collected during the "GUINEA-BISSAU 0810" survey, carried out in October - November 2008, on board of R/V Vizconde de Eza. During the survey, 100 sampling stations were accomplished and Hydroids were collected at 30 of them, between 21 and 895 m depth. The samples were obtained with a commercial otter trawl following a random stratified sampling methodology. Hydroid colonies were carefully sorted on board from the total catch and preserved in 70% ethanol for further studies.



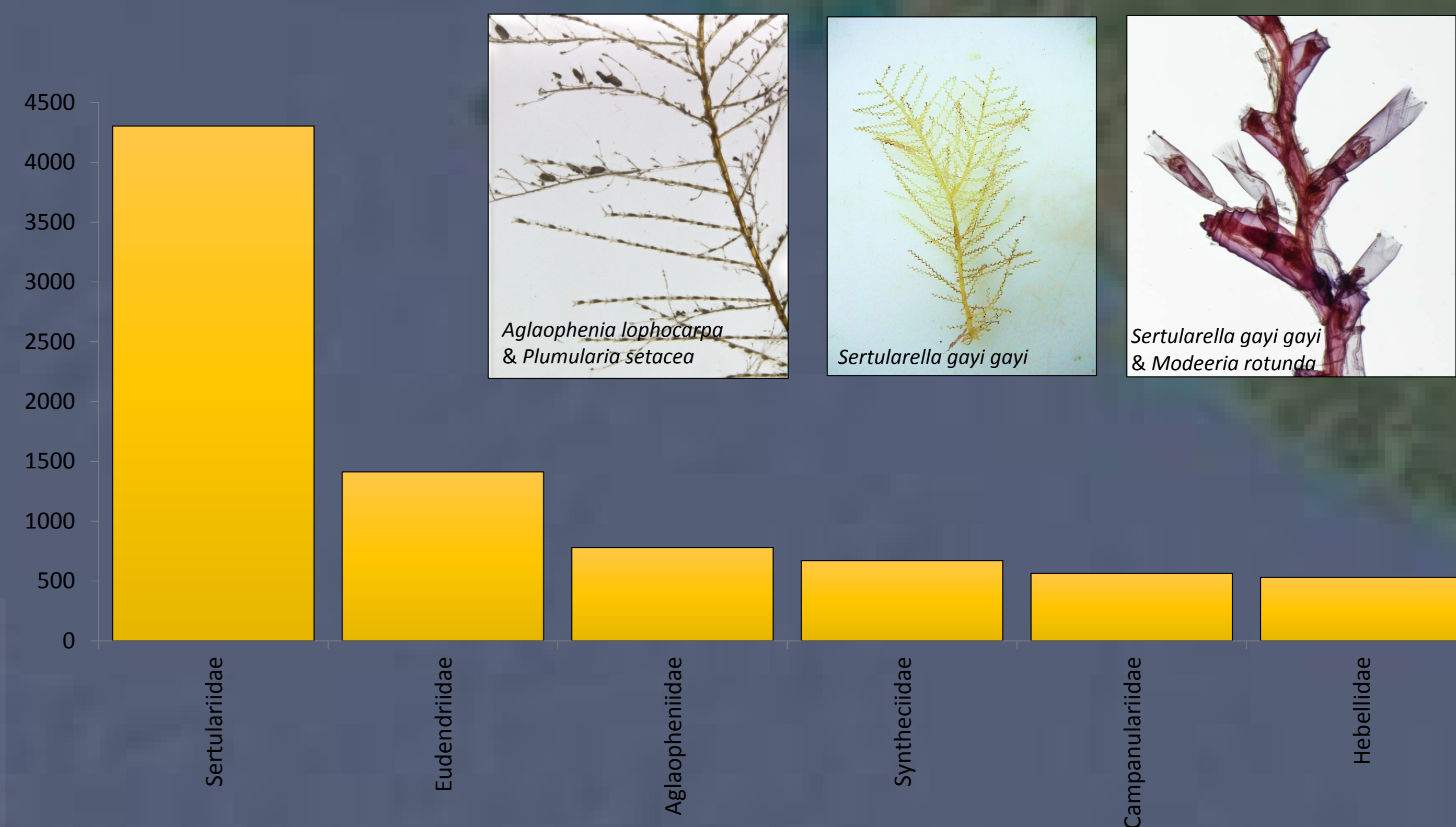
RESULTS

- A total of 10.116 colonies of hydroids were collected belonging to 74 species included in 18 different families.
- Thirty-seven species were reported for the first time in Guinea-Bissauan waters.
- The most specious families were Sertulariidae (17 species), Campanulariidae (12 species), Haleciidae (7 species) and Aglaopheniidae and Plumulariidae (6 species).
- The most abundant family was Sertulariidae (4303 colonies) mainly due to the abundance of *Idiellana pristis* (1640 colonies), *Diphasia digitalis* (1141 colonies) and *Sertularia loculosa* (643 colonies).
- Other abundant species were *Eudendrium capillare* (1369 colonies), *Hincksella cylindrica* (668 colonies) and *Lytocarpia myriophyllum* (554 colonies).

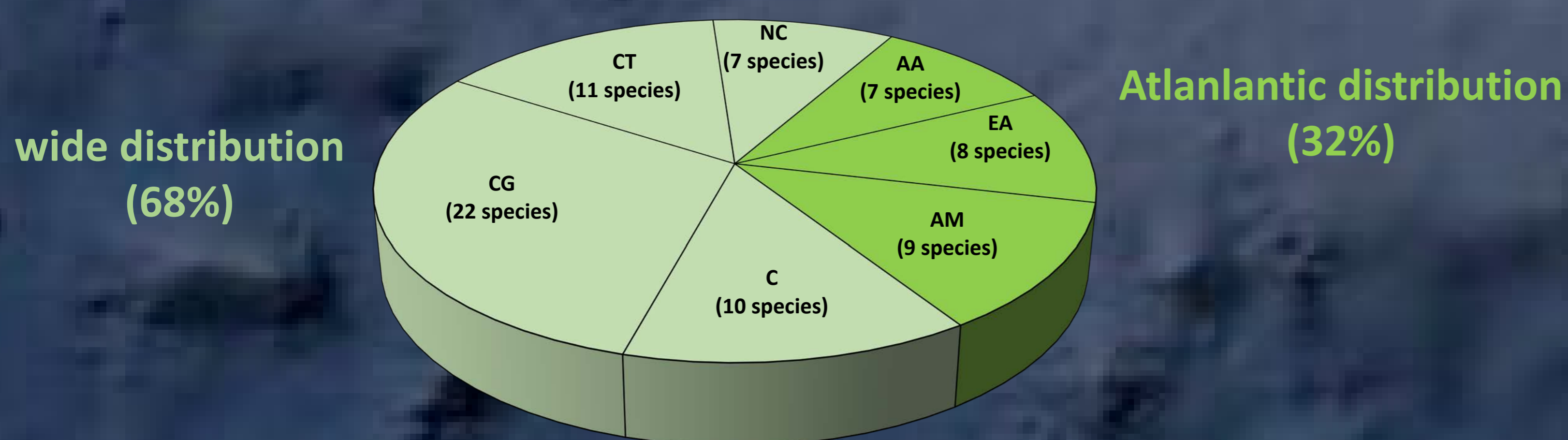
Species richness:



- The most abundant and widespread species were those that built big colonies with their hydrorhiza modified for anchoring in soft-bottoms and also species represented by small colonies that growth epibionts on other organisms.



- Analysis of geographical distribution patterns identifies two main components: species with wide distribution (cosmopolitan, circumglobal, circumtropical and non-classifiable; 68%) and Atlantic species (amphi-Atlantic, eastern Atlantic and Atlantic-Mediterranean; 32%).

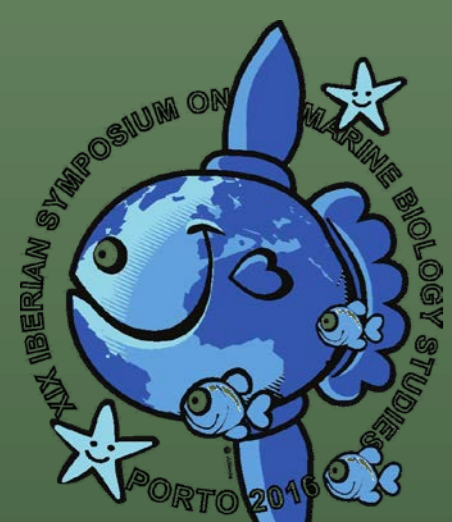


CONCLUSIONS

- Hydroids shows a high diversity in Guinea-Bissauan waters, comparable to those obtained in other areas from North-West Africa, namely Morocco, Sahara and Mauritania.
- Species with adaptations to live in soft-bottoms and those that display epibiontic strategies showed the highest abundance and occurrence.
- Species widely distributed in tropical waters perform the main zoogeographical component of the hydroid fauna in Guinea-Bissau

REFERENCES:

- Gili JM, Vervoort W, Pagés F (1989) *Sci Mar* 53(1):67–112.
 Jiménez, M. P., Sánchez-Leal, R. F., González, C., García-Isarch, E., & García, A. (2015). *J. Mar. Biol. Assoc. U. K.*,95(03), 435-452.
 Le Loeuff P & Van Cosel R (1998) *Acta Oecol* 19(3):309–321.
 Van Soest RWM (1993) *Hydrobiologia* 258:95–106.
 Vervoort W (1959) *Atlantide Report Scient Res Danish Exped coasts trop W Afr 1945–1946*, 5:211–325.



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