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# New record of the deep-sea jellyfish *Poralia rufescens* vanhöffen, 1902 (Class: *Scyphozoa*) in the Colombian Southern Caribbean

## Abstract

*Poralia rufescens*, Vanhöffen, 1902, is a bathypelagic *Semaestomeae* jellyfish that lives at depths below 600m in the Caribbean; this is the first report of this species and in general of a jellyfish in deep waters of the Colombian Caribbean and spotted in its natural environment thanks to ROV video recordings.

**Keywords:** *Poralia*, ROV video survey, ultra-deep waters, Colombian Caribbean

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## Introduction

Hydrocarbon exploratory drilling activities normally include ROV video surveys and towed camera transects of sites that are preselected for locating wells. During the exploratory activities between 2015 and 2017, jellyfish from the genus *Poralia* were sighted for the first time in deep waters of the Southwestern Colombian Caribbean, below 1500 m. ROV surveys were conducted in 80-100meter-long transects in cross fashion, with headings north, south, east, and west, from a central point. All video footage and still images were analyzed for the presence of *Poralia*, and, when found in the ROV videos, snapshots were taken using the software GOM player and VLC media player. For every visual confirmation, we registered coordinates, depth, time and date (Table 1).[1]

Seven (7) records of the jellyfish from the genus *Poralia* were identified from ROV videos (Figure 1) at a depth between 1565 and 1816m.

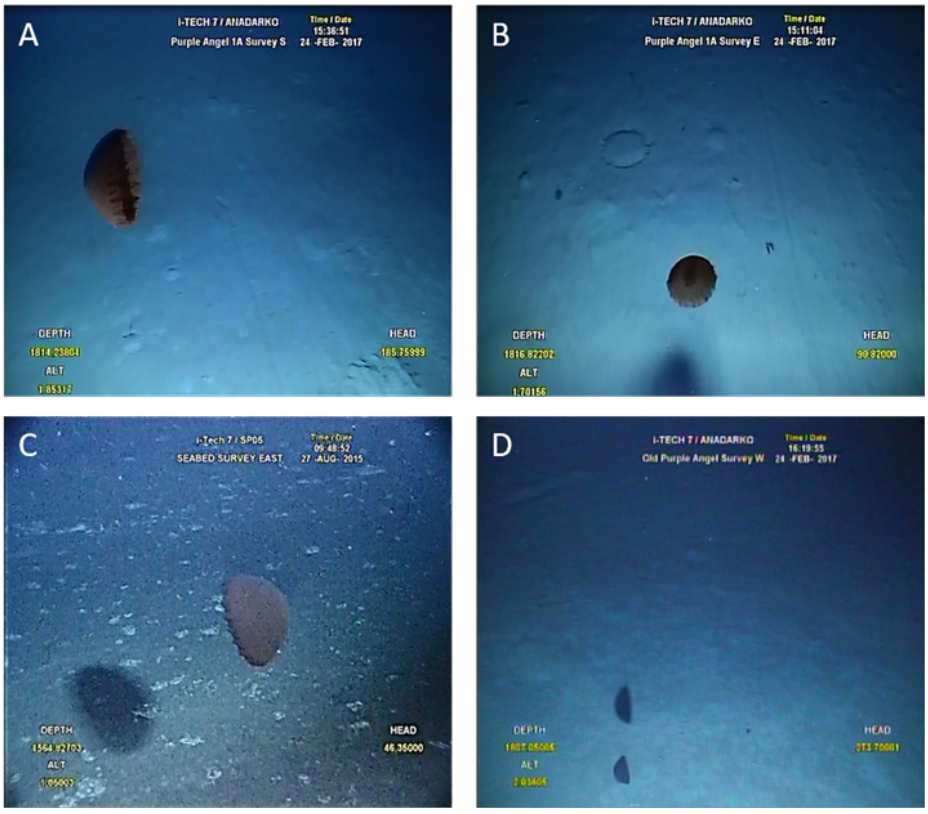


**Figure 1** Example of images obtained for *Poralia* sp. (A-D) during deep-sea hydrocarbon exploratory activities in the Southwestern Colombian Caribbean. Video-captures of *Poralia* sp. at (A) 1814m, (B) 1816m, (C) 1564m, and (D) 1807m deep.

**Table 1** Information on *Poralia* sp. sightings during deep-sea hydrocarbon exploratory activities using ROV surveys

| Image | Coordinates | | Depth (m) | Time | Date |
|---|---|---|---|---|---|
| | Lat (N) | Long (W) | | | mm/dd/aaaa |
| ROV_2015_KronosDep_0008 | 9.165 | -76.832 | 1565 | 9:48 | 8/27/2015 |
| ROV_2017_OldPADep_0009 | 9.207 | -76.832 | 1805 | 16:27 | 2/24/2017 |
| ROV_2017_OldPADep_0011 | 9.207 | -76.832 | 1809 | 16:19 | 2/24/2017 |
| ROV_2017_NewPADep_0014 | 9.209 | -76.832 | 1818 | 14:58 | 2/24/2017 |
| ROV_2017_NewPADep_0012 | 9.209 | -76.832 | 1816 | 15:11 | 2/24/2017 |
| ROV_2017_NewPADep_0013 | 9.209 | -76.832 | 1816 | 15:12 | 2/24/2017 |
| ROV_2017_NewPADep_0017 | 9.209 | -76.832 | 1814 | 15:36 | 2/24/2017 |

Phylum: *Cnidaria*

Class: *Scyphozoa*

Subclass: *Discomedusae*

Order: *Semaeostomeae*

Family: *Ulmaridae*

Subfamily: *Poraliinae*

Genus: *Poralia*

Species: *Poralia rufescens*

Vanhöffen, 1902

Five species of *Scyphozoa* jellyfish are known for the Colombian Caribbean, *Chrysaora* sp., *Aurelia* sp., *Cassiopea* sp., *Lychnohiza* sp. aff. lucerna and *Stomolophus meleagris* most of them from epipelagic waters.[2,3] This is the first report from a jellyfish in deeper waters from the Colombian Caribbean. *Poralia* jellyfish (*Scyphozoa*: Semaeostomeae: Ulmaridae) were seen in ROV video surveys (Table 1). *Poralia* belong to the subfamily Poraliinae with only one genus and one species: *Poralia rufescens*. In ROV videos *Poralia* is easy to identify by its distinguishing characteristics as are the vertical orientation in the water column, the bell's closed posture, the round ball shape and its reddish brown color typical of deep-sea jellyfish. Besides, it has a slow swim with relatively short tentacles extended out to the side and/or below the bell.[4,5] Although the identification based on still images is only possible if the diagnostic characters of the species are visible and distinguishable, it was possible to get confirmation of this species thanks to the review of some of its characters (Allen Collins, Smithsonian Institute, Washington DC, personal communication).

The scyphomedusae *Poralia* is a bathypelagic jellyfish that lives below 600m in close association with the benthic boundary layer. *Poralia* has been reported in the Western Atlantic (Bahamas, Dry Tortugas and New England)[6,7] and in the Gulf of Mexico.[8] Osborn et al.[5] analyzed the environmental data where mesopelagic scyphomedusae occur, and their results concluded that *Poralia* was found more often in waters coldest, saltier (34.40ppt) and with lower oxygen concentration (< 0.3ml/l).

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## Conflicts of interest

Authors declare that there is no conflicts of interest.

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