{rokbox title=|(A) Plain and (B) spotted ballan wrasses from Galicia (NW Spain) Author :: Image: Authors|
thumb=|images/stories/ieo/imagenespublicaciones/centro-oceanografico-baleares-ieo-fishing-alters-resource-partitioning-between-colour-morphs-temperate-coastal-fish-cardona-et-al-2020-thumb.jpg|}images/stories/ieo/imagenespublicaciones/centro-oceanografico-baleares-ieo-fishing-alters-resource-partitioning-between-colour-morphs-temperate-coastal-fish-cardona-et-al-2020.jpg
{/rokbox}

Luis Cardona, **Olga Reñones**, Adam Gouragine, Fabiana Saporiti, Alex Aguilar, **Joan Moranta**, 2020.
Fishing alters resource partitioning between colour morphs in a temperate coastal fish.
Mar Ecol Prog Ser 648:179-190. https://doi.org/10.3354/meps13440

Abstract: Resource partitioning in polymorphic fish species is expected to be altered by human exploitation, as individual specialization is density dependent in many vertebrates. We tested this hypothesis using the ballan wrasse Labrus bergylta as a model species. We compared the isotope niches of the plain and spotted morphs of the species in a marine protected area (MPA) and in adjoining areas open to fishing, both off Galicia (NW Spain). Underwater visual census confirmed a 3-fold increase in the biomass of ballan wrasse off the Cíes Islands compared to areas open to recreational fishing, thus demonstrating that populations outside MPAs are well below carrying capacity. The stable isotope ratio of C revealed differences in the resource use patterns of plain and spotted ballan wrasses both in areas open and closed to fishing, as plain wrasses were always depleted in 13C compared to sympatric spotted ones. The stable isotope ratio of N showed that plain ballan wrasses foraged consistently at a higher trophic level than spotted ones in areas of high population density closed to recreational fishing, whereas differences did not exist or were reversed in areas open to fishing. These results demonstrate that the pattern of trophic resource partitioning between 2 morphs of the ballan wrasse is density dependent and that plain and spotted ballan wrasses likely had different ecological niches in pristine ecosystems.

Keywords: Ballan wrasse, *Labrus bergylta*, Marine protected areas, Isotopic niche, Stable isotope analysis, Trophic polymorphism