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TESTING THE HABITAT HARSHNESS HYPOTHESIS: THE REPRODUCTIVE BIOLOGY OF THE WEDGE CLAM *Donax hanleyanus* (BIVALVIA: DONACIDAE) FROM THREE ARGENTINEAN SANDY BEACHES WITH CONTRASTING MORPHODYNAMICS

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The reproductive biology of *Donax hanleyanus* (Bivalvia: Donacidae) was studied in order to test the habitat harshness hypothesis, comparing three beaches with contrasting morphodynamics over 25 months. Histological analyses showed that: (1) the reproductive phase of *D. hanleyanus* was more extended in the reflective beach, (2) males and females showed significantly smaller sizes and biomass at which the population is mature from the dissipative and intermediate beach, compared to the reflective beach, (3) recruits were significantly more abundant and the recruitment period was significantly more extended at the dissipative beach, (4) spawning events were registered twice each year at the dissipative (early spring and spring-summer) and intermediate beach (winter and summer), whereby continuous gamete releases were noted at the reflective beach, (5) size at first maturity and biomass at first maturity were lower at the dissipative beach, whereas monthly mean abundance of *D. hanleyanus* was higher at the reflective beach, (6) the gametogenic cycle significantly correlates with sea surface temperature, relative spermatozoon abundance, condition index, ash-free shell-free dry mass, mean size and abundance of oocytes for all three populations. In conclusion, the reproduction biology of the Argentinean *D. hanleyanus* showed on population level clear responses to physical variables in a trend opposite to that predicted by the 'habitat harshness hypothesis', including higher abundance, extended reproductive cycle, extended period of spawning stage, larger size at first maturity and higher biomass at first maturity at the reflective beach. Summarising, results of the current study demonstrated important implications for sandy beach macrofauna, especially for supralittoral organisms, supporting the 'hypothesis of habitat safety', which states that the combination of narrow swashes and steep slopes make reflective beaches a more stable and safer environment for supralittoral species like it is *D. hanleyanus*.

Keywords: surf clam, sandy beach ecology, condition index, relative spermatozoon abundance, size at first maturity, biomass at first maturity, size and abundance of oocytes, HHH, 'hypothesis of habitat safety'

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VARIACIÓN ESPACIO TEMPORAL DE ALGUNOS MACROINVERTEBRADOS (SCLERACTINIA, GORGONACEA, GASTROPODA, BIVALVIA, CEPHALOPODA, ASTEROIDEA, ECHINOIDEA Y HOLOTHUROIDEA) DE FONDOS SOMEROS DE LA ISLA SAN JOSÉ, GOLFO DE CALIFORNIA

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Se realizaron seis expediciones a la isla San José, Golfo de California entre los años 1999 y 2000 en donde se llevaron a cabo las observaciones y muestreos. Con base en los muestreos se determinó el componente específico de tres Phyla de macroinvertebrados bentónicos en nueve localidades: Cnidaria (Scleractinia y Gorgonacea), Mollusca (Gastropoda, Bivalvia y Cephalopoda), y Echinodermata (Echinoidea, Asteroidea y Holothuroidea). La abundancia del macrobentos conspicuo se estimó visualmente mediante buceo libre a una profundidad entre 2 y 6 m a lo largo de dos transectos en banda paralelos a la línea de costa. Se determinó un total de 38 taxa de los tres grupos. Las especies más abundantes