

Population dynamics, feeding ecology, and larval biology of the surf clam,
Donax hanleyanus

Marko Herrmann^{1,2}, Jürgen Laudien², Sigrid B. Schnack-Schiel², Wolf E. Arntz²

¹ Lab. Invertebrados. Depto. Biología. Facultad de Ciencias Exactas y Naturales. Universidad de Buenos Aires, Argentina

² Alfred-Wegener-Institute for Polar and Marine Research (AWI) Bremerhaven, Germany

email: Marko.Herrmann@gmx.de

Exposed intertidal sandy beaches are often dominated by bivalves of the family Donacidae (super family Tellinacea), constituted by the genera *Donax*, *Egeria* and *Iphigeni*. On a worldwide basis, Donacidae form by far the largest group inhabiting such highly dynamic environments. The surf clam *Donax hanleyanus*, also known as “berberecho”, can be found along the Atlantic coast of South America, from Rio de Janeiro (Brazil) to northern Argentina. Along the coast of the Buenos Aires Province (Argentina), *D. hanleyanus* is abundant from San Clemente to Punta Mogotes, south of Mar del Plata. The beaches represent the southernmost habitats of a *Donax* species in the south western Atlantic. *D. hanleyanus* has a maximum adult size of 4.2 mm and rarely lives for more than 4 yr. In order to study the gametogenic cycle, recruitment patterns, growth, production, and mortality, monthly sampling has been carried out in Santa Teresita, Villa Gesell and Faro Querandi. First results on growth based on cohort analysis are presented. For microgrowth analysis fluorescent stains (Alizarine, Calcein, Strontium chloride) are used. To estimate the economically optimal bivalve and food densities in aquaculture systems, nutrition experiments with the algae *Isochrysis galbana*, *Chaetoceros* sp. and *Tetraselmis* sp. has been carried out. For the observation of the embryonic and larval development under controlled conditions, induction of spawning was necessary by thermal shocks and injection of Serotonin.