

## **RESUMEN**

*Buccinanops globulosus* (Kiener, 1834) es un gasterópodo marino perteneciente a la familia Nassariidae. Esta especie habita aguas costeras a profundidades de hasta 10 m y se distribuye desde Uruguay (34° S) hasta la provincia de Santa Cruz en Argentina (48° S). El objetivo general del presente trabajo de tesis fue evaluar la variación intra e interpoblacional en las estrategias vitales de esta especie, con énfasis en los aspectos morfométricos, reproductivos y de crecimiento, en tres sitios costeros, dos localizados en el Golfo San Matías (GSM) y uno en el Golfo Nuevo (GN).

Se realizaron campañas mensuales durante el período junio 2006 – junio 2008 en el sector intermareal-submareal somero de bahía de San Antonio y Playa Villarino (GSM) y Bahía Nueva (GN). Con el fin de evaluar las características biológicas y demográficas, se registraron las variables morfogravimétricas y se determinó el sexo de cada individuo. La edad se determinó a partir de la lectura de opérculos, y el crecimiento fue descrito utilizando datos de talla-edad. Se estudió el ciclo gonadal de las hembras a partir de técnicas histológicas y se analizaron otras variables reproductivas a partir de oviposturas. Además, se estudió la variación morfométrica de la rádula y de la concha. También se realizó cría bajo condiciones homogéneas de los individuos provenientes de las diferentes poblaciones.

Los individuos de Playa Villarino presentaron un mayor crecimiento global que los de los otros sitios de estudio. Las tallas máximas registradas fueron de 67, 51 y 32 mm de largo total en Playa Villarino, Bahía Nueva y bahía de San Antonio respectivamente. La edad máxima, en todas las poblaciones, fue de ocho años, encontrándose diferencias intersexuales en los parámetros de crecimiento dentro de cada población. En su mayoría, las variables morfométricas estudiadas referidas a la concha, la rádula y las oviposturas, se relacionaron positivamente con el tamaño corporal, presentando así valores mayores en los individuos de

Playa Villarino. La talla mínima de las hembras ovígeras fue de 48 mm en Playa Villarino, 23 mm en Bahía Nueva y 17 mm en bahía de San Antonio y en coincidencia con la talla de primera madurez estimada a partir de criterios histológicos; estas tallas se corresponden con edades de entre dos y cuatro años. No se encontraron diferencias en las tasas de crecimiento entre los individuos provenientes de los diferentes sitios de estudio luego de casi medio año de cría en condiciones controladas de laboratorio.

Las diferencias en el tamaño corporal encontradas en *B. globulosus* podrían ser interpretadas como distintos fenotipos que se expresan de acuerdo a las condiciones locales que operan en cada población. La variación interpoblacional observada en el presente trabajo estuvo principalmente relacionada con tales diferencias de tamaño, variación alométrica. Sin embargo, también se detectaron variaciones en otros aspectos, como la edad a la madurez, que estarían vinculados a la relación fenotipo – ambiente particular de cada sitio de estudio. Los patrones observados podrían estar modulados por la disponibilidad de alimento y los niveles de depredación.

A partir de los resultados obtenidos, se pone de manifiesto la importancia de estudiar a las diferentes poblaciones en forma integral, más aún si sobre alguna de ellas se desarrolla una actividad extractiva.

## **ABSTRACT**

*Buccinanops globulosus* (Kiener, 1834) is an endemic nassariid gastropod from the Southwestern Atlantic Ocean. It is typically found in coastal waters at depths of up to 10 m in an area extending from Uruguay (34°S) to Santa Cruz Province (48°S), in Patagonia, Argentina. The aim of this thesis was to evaluate the variations in the life cycle of this species, mainly in relation to morphometrics, reproductive and growth models, among three different coastal environments, two located at San Matías Gulf (SMG) and one at Nuevo Gulf (NG).

A monthly sampling program was carried out during June 2006- June 2008 in the intertidal and low- subtidal zone in San Antonio Bay and Playa Villarino (SMG) and Nueva Bay (NG). To evaluate biological and demographic characteristics of each population, morphogravimetric variables were measured and sex was determined on each individual. Age determination was performed by counting opercular striae and growth was studied by means of length-age data. Histological techniques were used to describe female gonadal cycle while other reproductive traits were studied from egg capsules taken from ovigerous females. Morphometric variation was assessed on shell and radula. In addition, individuals from the three sites were rearing under homogenous laboratory conditions to evaluate their growth rates.

Individuals from Playa Villarino showed greater asymptotic lengths and higher overall growth pattern. Maximum total shell lengths were 67, 52 and 32 mm in Playa Villarino, Nueva Bay and San Antonio Bay, respectively. The highest number of opercular striae was eight. Differences in growth parameters were detected between sexes within each population. Morphometric variables, for shell, radulae and egg capsules, were mostly related to size differences among populations and thus were larger in Playa Villarino. The minimum length of a female carrying egg capsules was 48, 23 and 17 mm, coincidentally with maturity

based on histological criteria, at approximately two - four years. No differences in growth rates among individuals from the three sites were found when they were reared under homogenous conditions.

Size differences among populations may represent phenotypic plasticity in response to local conditions, ecological and environmental factors, operating at each site. Interpopulation variability was mainly related to size differences, allometric variation. However, others traits like age at maturity seem to represent a compromise between phenotype and environment. Food availability and predation pressure may be related with the observed patterns in the studied populations.

This study highlights the importance of studying each population as a whole, moreover if an extractive activity is performed.

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