

**ProBiota, FCNyM, UNLP**  
**ISSN 1515-9329**

**Serie Técnica y Didáctica n° 21(03)**

**Semblanzas Ictiológicas**  
**Leonardo Ariel Venerus**



**Hugo L. López**  
**y**  
**Justina Ponte Gómez**

**Indizada en la base de datos ASEFA C.S.A.**  
**2013**

## **Semblanzas Ictiológicas**

**Leonardo Ariel Venerus**



**Hugo L. López y Justina Ponte Gómez**

**ProBiota**  
División Zoología Vertebrados  
Museo de La Plata  
FCNyM, UNLP

2013

### **Imagen de tapa**

Leonardo Venerus y Julia Venerus Useglio, playa de Puerto Madryn, verano de 2013

*El tiempo acaso no exista. Es posible que no pase y sólo pasemos nosotros.*

**Tulio Carella**

## **Semblanzas Ictiológicas**

A través de esta serie intentaremos conocer diferentes facetas personales de los integrantes de nuestra “comunidad”.

El cuestionario, además de su principal objetivo, con sus respuestas quizás nos ayude a encontrar entre nosotros puntos en común que vayan más allá de nuestros temas de trabajo.

Esperamos que esta iniciativa pueda ser otro nexo entre los ictiólogos de la región, ya que consideramos que el resultado general trascendería nuestras fronteras.

***Hugo L. López***

**Nombre y apellido completos:** Leonardo Ariel Venerus

**Lugar y fecha de nacimiento:** Lomas de Zamora, 26 de Abril de 1974

**Lugar, provincia y país de residencia:** Puerto Madryn, Chubut, Argentina

**Título máximo, Facultad y Universidad:** Doctor en Ciencias Biológicas, FCEyN, UBA

**Posición laboral:** Investigador Asistente (CONICET)

**Lugar de trabajo:** Centro Nacional Patagónico (CENPAT – CONICET)

**Especialidad o línea de trabajo:** Ecología y manejo de peces de arrecife

**Correo electrónico:** [leo@cenpat.edu.ar](mailto:leo@cenpat.edu.ar), [lvenerus@yahoo.com](mailto:lvenerus@yahoo.com)

## Cuestionario

- Un libro:** El extranjero, de A. Camus
- Una película:** Taxi Driver, de M. Scorsese
- Un tema musical:** Apart, de The Cure
- Un artista:** Manu Chao
- Un deporte:** Fútbol
- Un color:** Negro (para disimular la panza)
- Una comida:** Asado
- Un animal:** Perro
- Una palabra:** Capítulo (porque me causa gracia como lo dice Julia, mi hija mayor)
- Un número:** 21
- Una imagen:** La estepa en el terreno donde está mi casa
- Un lugar:** El Caribe, cualquier playa
- Una estación del año:** Otoño
- Un nombre:** Dante
- Un hombre:** Charles Bukowski
- Una mujer:** Paula, mi esposa
- Un personaje de ficción:** Walter White, el protagonista de Breaking Bad
- Un superhéroe:** El cazador



Universidad de Buenos Aires  
Facultad de Ciencias Exactas y Naturales

**Dinámica espacial del salmón de mar *Pseudoperca semifasciata* (Cuvier, 1829) (Pinguipedidae) –  
Implicancias para el uso sustentable de los  
sistemas de arrecifes rocosos**

Tesis presentada para optar al título de Doctor de la Universidad de  
Buenos Aires en el área de las Ciencias Biológicas

**Leonardo Ariel Venerus**

Directores de tesis: Dra. Ana M. Parma

Dr. Martín D. Ehrlich

Consejera de estudios: Dra. Graciela Esnal

Centro Nacional Patagónico (CENPAT – CONICET)

Buenos Aires, 2006

Author's personal copy

Fisheries Research 140(2013) 133–148



Contents lists available at SciVerse ScienceDirect

Fisheries Research

Journal homepage: [www.elsevier.com/locate/fishres](http://www.elsevier.com/locate/fishres)

## Assessment of biases in the estimation of tag shedding rates through a mark-resight experiment

Leonardo A. Venerus\*, Alejo J. Irigoyen, Ana M. Parma

Centro Nacional Patagónico – Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET), Boulevard Brown 2915 (U9120ACD) Puerto Madryn, Chubut, Argentina

### ARTICLE INFO

#### Article history:

Received 30 April 2012

Received in revised form 19 June 2012

Accepted 23 December 2012

#### Keywords:

Tag loss estimation methods

Small-scale tagging studies

Rocky reef fish

*Pseudoperca semifasciata*

### ABSTRACT

Several flexible methods for estimating tag loss rates through mark-resight data have been developed recently. They allow evaluation of different tag shedding modalities and relax the usual assumption of independence between the loss of tags made in classical double-tagging methods. Two conditions limit the applicability of these methods: (1) tagged individuals must have permanent marks so that they can still be identified after losing their tags, and (2) a large number of observations is required to obtain precise estimates. Here we evaluate the performance of alternative estimators of tag shedding rates when these conditions are not met, a situation that is very common in mark-resight experiments on reef fishes. We simulated resighting data using a simple exponential model of tag shedding under different scenarios created by varying the probabilities of fish detection and fish emigration from the reef, and the tagging schedule. The model was conditioned on actual data from a short-term (~1.5 years) double-tagging study conducted on the Argentine sandperch *Pseudoperca semifasciata* (Cuvier 1829) in rocky reefs of northern Patagonia. We tested eight estimation procedures: three variants of an individual-based method, two based on a binomial likelihood function for exact or pooled times-at-liberty data, and three regression methods. Although the individual-based approach produced unbiased and most precise estimates when individuals that had lost both tags were identifiable, it performed poorly in the absence of permanent tags. In contrast, conditional methods, which do not require identification of individuals that have lost both tags, were more robust, providing unbiased and precise estimates. The pros and cons of the different methods for analyzing small-scale mark-resight experiments are discussed.

© 2013 Published by Elsevier B.V.

### 1. Introduction

The individual identification of animals and the application of mark-recapture techniques are classic approaches for studying demography, life history and behavior of animal populations. Mark-resight methods, a variant of mark-recapture in which tags are "recaptured" via non-invasive sighting surveys (e.g. visual censuses, camera traps, radio tracking, etc.) are particularly useful for studying vulnerable species or species that inhabit protected areas or no-take reserves, as animals do not need to be killed to recover the tags. Those methods do not involve capturing and handling animals once they have been tagged; therefore, mark-resight techniques are generally less stressful for the animals and less expensive than traditional mark-recapture techniques because fewer and less trained personnel are needed, more data can be gathered in less time, and resights can be made while pursuing other research objectives (Minta and Mangel, 1989). This is particularly relevant in

studies of unexploited populations, in which the costs of recapturing the animals are provided almost exclusively by limited research funds (Castro and Rosa, 2005). A major limitation of mark-resight methods, however, is that they require identification of individuals or tag identities (e.g. through field-readable tags).

In the case of reef fishes, resightings are typically done by scuba diving, which further constrains the size, and spatial and temporal scales of the experiments: censused areas are usually much smaller than 1 km<sup>2</sup> and survey programs commonly last less than a year (e.g. Annese and Kingsford, 2005; Castro and Rosa, 2005; Corless et al., 1997; Zeller and Russ, 2000). Yet, these localized experiments can be informative about reef site fidelity, home range and small-scale movement of fishes, and their spill-over from marine reserves (e.g. Annese and Kingsford, 2005; Chapman and Kramer, 2000; Cole et al., 2000). The probability of detecting tagged individuals during surveys is reduced by temporary displacement of fishes engaged in foraging or reproductive activities out of the censused area, even if for brief periods, cryptic behavior of certain species, and poor visibility. In the absence of permanent marks, reductions in the number of total resightings resulting from tag shedding cannot be distinguished at first sight from those due to emigration, death or just failed detection. Accounting for tag loss is therefore essential

\* Corresponding author. Tel.: +54 280 445 1024x1286; fax: +54 280 445 1543.  
E-mail addresses: leo@cenpat.edu.ar (L.A. Venerus), alejo@cenpat.edu.ar (A.J. Irigoyen), parma@cenpat.edu.ar (A.M. Parma).



Leonardo y Mariano Venerus, Don Bosco, Buenos Aires, principios de los '80



*Los invitamos a celebrar nuestro casamiento  
Viernes 28 de marzo de 2008 - Rancho Cucamonga, Puerto Madryn  
(a partir de las 20:30 hs.)*

*Paula Useglio y Leo Venerus*

Por favor, confirmen su asistencia antes del Viernes 29 de febrero. Por consultas sobre alojamiento, cómo llegar, etc., contacten a nuestra wedding planner Silvina Van der Molen incluyendo la palabra **Silvi** en el *subject* del correo.

Elegante (ELLAS) sport (ELLOS)





Cenote Carwash, Quintana Roo, Mexico, diciembre 2008  
Leonardo Venerus, arriba

**Esta publicación debe citarse:**

**López, H. L. & J. Ponte Gómez.** 2013. Semblanzas Ictiológicas: *Leonardo Ariel Venerus*. *ProBiota*, FCNyM, UNLP, La Plata, Argentina, *Serie Técnica y Didáctica* 21(03): 1-10. ISSN 1515-9329.

## **ProBiota**

*(Programa para el estudio y uso sustentable de la biota austral)*

Museo de La Plata  
Facultad de Ciencias Naturales y Museo, UNLP  
Paseo del Bosque s/n, 1900 La Plata, Argentina

### **Directores**

**Dr. Hugo L. López**

hlopez@fcnym.unlp.edu.ar

**Dr. Jorge V. Crisci**

crisci@fcnym.unlp.edu.ar

Versión electrónica, diseño y composición

**Justina Ponte Gómez**

División Zoología Vertebrados

Museo de La Plata

FCNyM, UNLP

jpg\_47@yahoo.com.mx

<http://ictiologiaargentina.blogspot.com/>

<http://raulringuelet.blogspot.com.ar/>

<http://aquacomm.fcla.edu>

<http://sedici.unlp.edu.ar/>

Indizada en la base de datos ASFA C.S.A.