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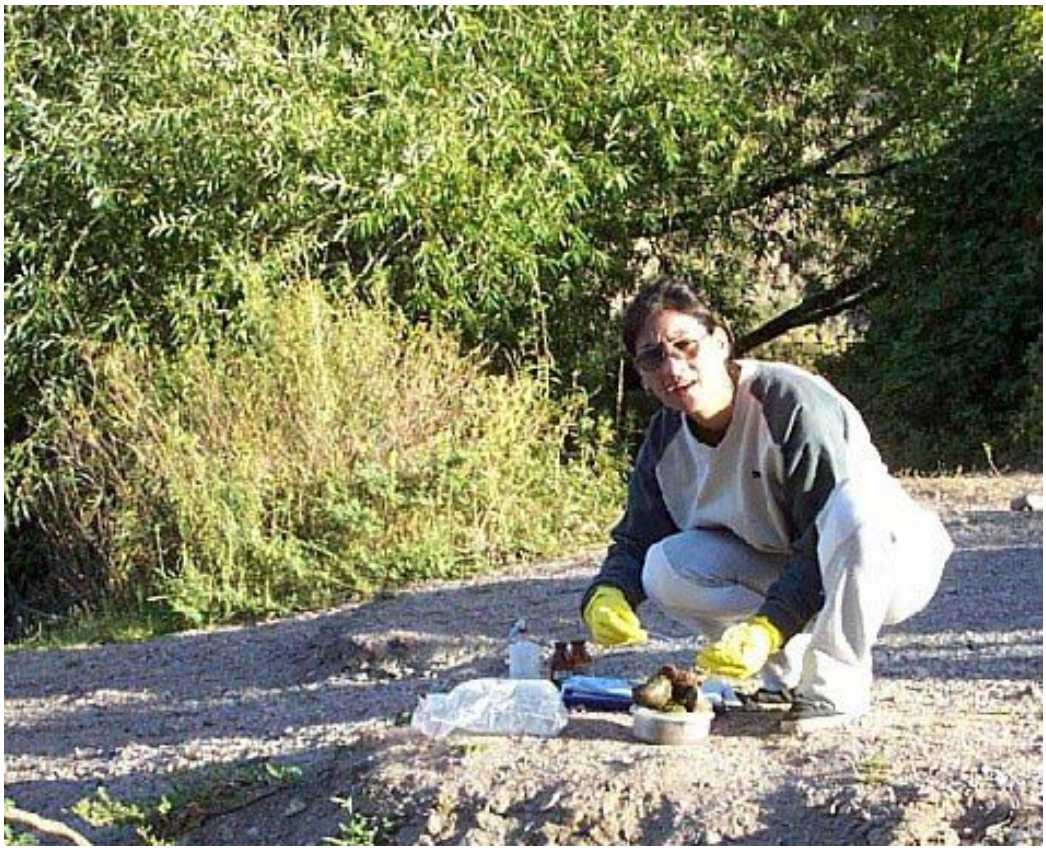
Semblanzas Ictiológicas
Cecilia Yanina Di Prinzio

Hugo L. López
y
Justina Ponte Gómez

Indizada en la base de datos ASFA C.S.A.
2013

Semblanzas Ictiológicas

Cecilia Yanina Di Prinzio



Cecilia Di Prinzio muestreando en el Río Chubut, 2003

Hugo L. López y Justina Ponte Gómez

ProBiota
División Zoología Vertebrados
Museo de La Plata
FCNyM, UNLP

2013

Imagen de Tapa

Cecilia Di Prinzio en el Río Chubut

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

Tulio Carella

Cinco minutos bastan para soñar toda una vida, así de relativo es el tiempo.

Mario Benedetti

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 y sea un aporte a futuros estudios históricos.

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

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Cuestionario

-**Un libro**: El Martín Fierro

-**Una película**: Mamma Mia

-**Un CD** : Soda Stereo

-**Un artista**: Dalí

-**Un deporte**: Rugby

-**Un color**: verde

-**Una comida**: Milanesa con papas fritas

-**Un animal**: tigre

-**Una palabra**: equilibrio

-**Un número**: nueve

-**Una imagen**: la virgen María

-**Un lugar**: mi hogar

-**Una estación del año**: primavera

-**Un nombre**: Calipso

-**Un hombre**: Juan Pablo II

-**Una mujer**: Lola Mora

-**Un personaje de ficción**: Papá Noel

-**Un superhéroe**: Super Hijitus

Fisheries Management and Ecology

Fisheries Management and Ecology, 2013

Feeding strategy of the non-native rainbow trout, *Oncorhynchus mykiss*, in low-order Patagonian streams

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Abstract The dietary composition and feeding strategy of rainbow trout, *Oncorhynchus mykiss* (Walbaum), in two low-order Patagonian streams were studied. Benthic macroinvertebrate availability was estimated in both riffles and pools. Fish stomach contents were examined to determine prey richness and diversity, prey electivity, food-niche width, and the feeding strategy employed by trout throughout the year. Availability of benthos varied seasonally with Ephemeroptera, Trichoptera, Plecoptera and Diptera species dominating. Rainbow trout diet was composed mainly of benthic macroinvertebrates, followed by terrestrial insects, fish, algae and plants. Different trout size classes segregated the use of food resources to reduce predation pressure. Elected prey included organisms displaying no to high mobility. A high feeding plasticity allows trout to buffer changes in food availability by switching from a specialised to a generalised feeding behaviour. Consequently, trout may exploit abundant but temporary food resources opportunistically, which would explain their marked expansion in Patagonian environments.

KEYWORDS: benthos availability, diet composition, exotic trout, feeding strategy, Patagonia, stream.

Introduction

Non-native fish introductions into freshwater ecosystems is a common practice that often depends on decisions taken by management agencies aimed at developing sport fishing and aquaculture (Soto *et al.* 2001). The negative impact of introduced fish on native fish faunas is well established, although concrete evidence is often lacking, particularly regarding invasion mechanisms (Kolar & Lodge 2000; Gozlan *et al.* 2010). However, it is well known that fish predation alters ecosystem processes by top-down effects, which in turn affect vulnerable or functional components of the community (Nakano *et al.* 1999; Greig & McIntosh 2006). Salmonids are aggressive predators that are visually size-selective and that feed mainly on drifting invertebrates (Newman & Waters 1984). Consequently, trout are known to have negative effects at the individual, population, community and ecosystem levels in invaded systems (McIntosh & Townsend 1996; Nyström *et al.* 2001; Townsend 2003).

Invertebrate availability in a particular stream may determine fish diet – thus for a determined species, diets are likely to be quite variable among streams. Moreover, it has been suggested that predators frequently feed in particular habitats and preferentially consume certain prey types (Zaret 1980; Reznick 1983; Sih 1987). Thus, research on fish diet and prey availability at a microhabitat scale is important to understand trout feeding strategy.

In Patagonia, the native freshwater fish fauna (Ringuelet 1975; Arratia *et al.* 1983) comprises only 15 species (Baigún & Ferriz 2003). Currently, Patagonian

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The establishment of exotic Chinook salmon (*Oncorhynchus tshawytscha*) in Pacific rivers of Chubut, Patagonia, Argentina

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The aim of this paper is to report the colonization process of three headwater rivers of two large trans-national Pacific river basins shared by Chile and Argentina, by exotic Chinook salmon (*Oncorhynchus tshawytscha*). To characterize the populations at the sites, fish were analyzed in terms of length, weight, age, and stream residency patterns. Fishermen familiar with the area were interviewed to establish the seasonal occurrence of fish and to reconstruct the history of the colonization process. Records of salmon production in Chile by regions were examined to evaluate the potential origin of fish in coastal net pen aquaculture. The regularity of spawning runs in our study sites indicates that Chinook salmon have established spawning populations in these rivers. While spawning was verified in all three rivers, only one seems to serve as a holding area for pre-spawning salmon early in spring. The correlation in the historical occurrence of Chinook salmon in the three rivers suggests that they have been colonized as part of the same introduction event. Moreover, the temporal correlation with the development of ocean net pen production for this species in the Chiloé region suggests that the fish may originate from escapes from these enterprises. As in all previous reports of exotic Chinook salmon in Patagonia and New Zealand, populations in the three rivers have a combination of stream and ocean ecotypes. We discuss the importance of plasticity in critical life history characteristics for the success of Chinook salmon in Patagonia, compared to other species of anadromous salmonids.

Keywords: Invasion, Chinook salmon, Pacific basins of Argentina, Patagonia.

Introduction

Salmon and trout species, which are native to the northern hemisphere, are among some of the most widely introduced species around the world, including southern South America. Over the last 20 years, Chile has become a colossal producer of farmed salmon (FAO 2002). With an annual production of over half a million metric tons (SERNAP 2005), it is expected to soon surpass Norway as the largest producer in the world (SalmonChile 2005). The beginnings of salmon aquaculture in Chile can be traced back to different ocean ranching experiments conducted during the early 1980 (Basulto 2003). Although these experiments failed to produce significant results from a commercial viewpoint, they developed knowledge and methods that launched ocean net pen aquaculture. The ideal conditions provided by the Chilean coast for temperate water aquaculture quickly attracted overseas investments and technology, producing highly productive salmon aquaculture that continues to grow.

As salmon aquaculture increased, so did reports of fish straying into rivers of southern Chile (Soto et al. 2001) and Argentina (Grosman 1992, Ciancio et al. 2005, Becker et al. 2007, Pascual & Ciancio 2007). Because of the complexity of the salmon life cycle, their introgression can have cascading effects on both marine and freshwater communities (Pascual & Ciancio 2007). Anadromous salmon may constitute an important agent for the transport of nutrients from the ocean to freshwater and thus disturbing natural cycles and balances of the system. Other potential problems are introduction of new diseases and disruption of the community due to predation and competition. So, evaluating risks associated to their expansion presents us with a huge challenge. A logical first step is to track the presence of spawning populations of a particular species, which constitute the basic demographic unit of salmon metapopulations (Cooper & Mangel 1999).

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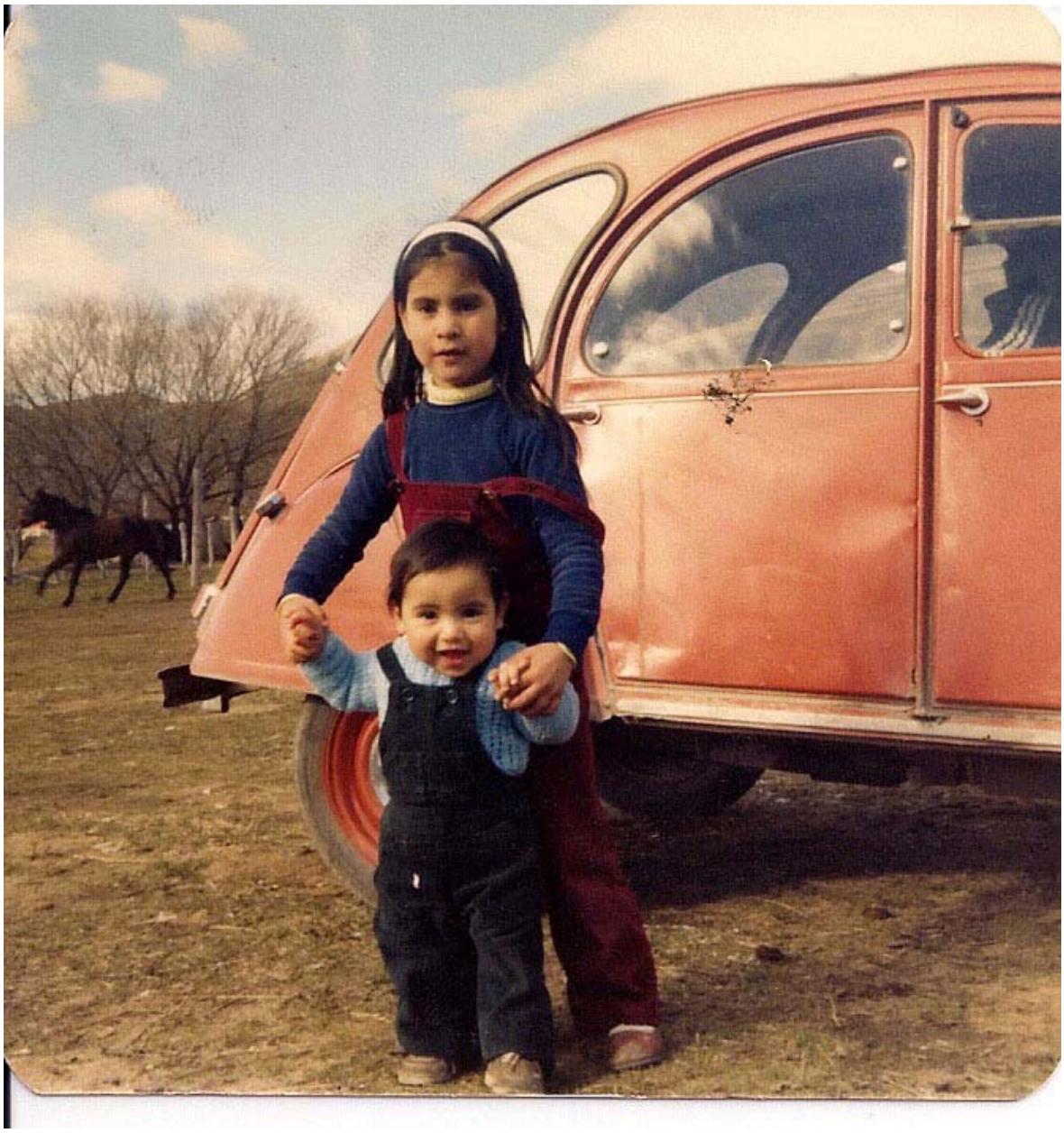
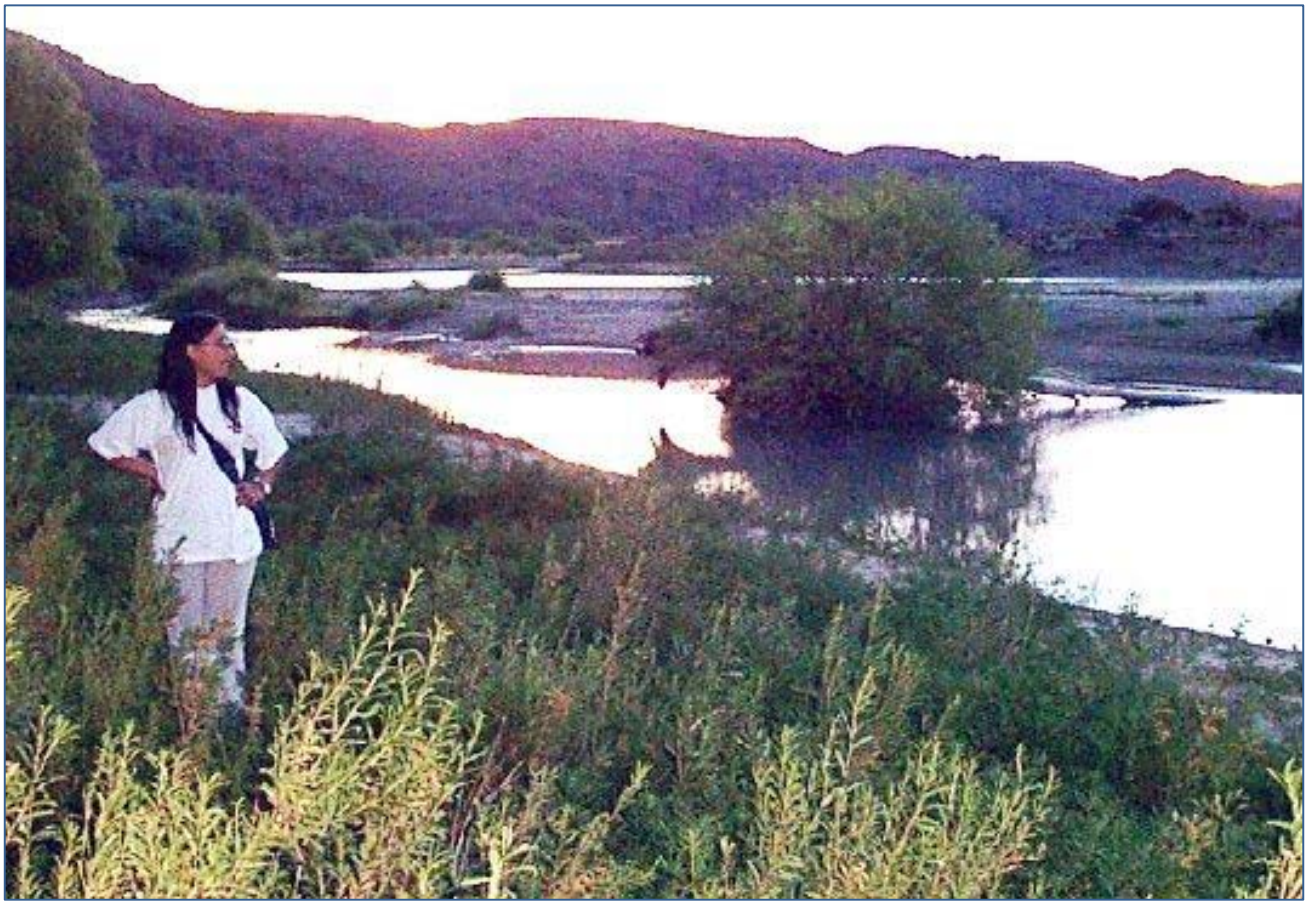
Cecilia, primeros pasos,1975

Comenzando el primario-1° día de clase-1979



Cecilia y su hermano Diego en Esquel, 1981

Cecilia Di Prinzio con su huja Juliana en Esquel, noviembre de 2012



Un alto en el muestreo para observar el paisaje, Río Chubut, 2004

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