Supplemental Text 1

*Environmental, Ethnographic and Archaeological Context*

Southern Patagonia is geographically and ecologically diverse. The Andes Mountain Range constitutes the west margin of the area, bordered by forests. The weather is cold in this region, with annual precipitation between 500 and 1000 mm (McCulloc et al. 2005). In contrast, extra-mountain regions in the continent and in the north-center of Tierra del Fuego Island, near the Atlantic Ocean, are characterized by desert steppes with precipitations below 400 mm per year that are crossed by a few major rivers. These climatic and environmental characteristics have remained relatively stable during the last 5000 years, although some local specific changes in temperature and humidity were identified during late Holocene (e.g*.*, Borromei et al. 2007).

 The archaeological data offer evidence of human occupation since at least the Late Pleistocene (ca. 11.000 years BP) in the continent and the north of Tierra del Fuego and since the middle Holocene (ca. 8000 years PB) in southern Tierra del Fuego (see Steele and Politis 2009 for a review). According to ethnographic and ethnohistoric data (e.g., Gusinde 1982, 1986; Saletta 2014), two main lifestyles were developed by the indigenous populations: terrestrial hunter-gatherers (Aonikenk in the south of the continent and Selk´nak in the north of Tierra del Fuego), and maritime hunter-gatherers (Kaweshkar in the southwest of Southern Patagonia and Yámanas in the south of Tierra del Fuego). The dichotomy between these two subsistence strategies has been under consideration since the 1990s, based on the abundant zooarchaeological data and stable isotopes of carbon and nitrogen. These results indicate that hunter-gatherers with polarized subsistence patterns could be recognized in a macro-regional scale, but also suggested the existence of intermediate economies, exploiting terrestrial and marine resources in variable amounts (e.g., Barberena 2008; Borrero and Charlin 2010; Borrero et al. 2009; Orquera and Piana 2009; San Román et al. 2016; Tivoli and Zangrando 2011; Zangrando 2009).

Differences in physical appearance between terrestrial and marine hunter-gatherers were mentioned in ethnographic accounts. The former were described as tall and strong individuals, contrasting with the short stature of marine hunter-gatherers from southern Tierra del Fuego (e.g., Gusinde 1982). These differences between continental and Fuegian populations were identified through morphological studies from skeletal remains (Alfonso-Durruty et al. 2015, 2017; Cocilovo and Guichón 1986; Varela et al. 1993-1994), and mainly attributed to morphological divergences as a result of the biogeographical isolation produced by the formation of the Magellan Strait ca. 8000 years BP and the development of terrestrial and marine economies (González-José et al. 2002; Pérez et al. 2007). This isolation does not appear to have been complete, given that researchers have provided evidence for the active interchange of people, tools, and information between groups from the continent and the north of Tierra del Fuego for at least the last 2000 years BP (Borrero and Charlin 2010; Morello et al. 2012). Analyses of mitochondrial DNA also indicate that continental and Fuegian populations were ancestrally related, as well as northern and southern groups from Tierra del Fuego (Lalueza et al. 1997) and Kaweshkar and Yámanas in southern Tierra del Fuego (De la Fuente et al. 2015).

No cemeteries from pre-Hispanic periods were found in Southern Patagonia. Instead, most of the burials are isolated and include just one individual, with the exception of a few multiple burials (e.g., L´Heureux and Amorosi 2009, 2010; L´Heureux and Barberena 2008; Santiago et al. 2011). No evidence of secondary mortuary practices have been reported and bodies were not commonly moved after being interred (Barberena 2008; Tessone 2014). Probably related to these characteristics of the burials, much paleopathological and bioarchaeological research is focused on commingling skeletons from several archaeological sites grouped under ethnographic, geographical or paleodietary criteria in order to analyze larger samples.

Considering the dated skeletons, the bioarcheological record covers only the last ca. 6000 years BP. Taphonomical and archaeological biases are the most probable causes for the lack of most ancient remains from the Pleistocene and the early Holocene (Dillehay 1997). The higher frequency of chronological data from the last 1500 years BP has been suggested to be evidence of demographic increase in human populations, although taphonomic biases (i.e., more and better preservation of recent skeletons) could influence this proposal (e.g., Barberena 2008; Pallo and Ozán 2014; Suby et al. 2017; Tívoli and Zangrando 2011). Nevertheless, only a small number of skeletons have chronological data (see Suby et al. 2017 for a detail) and it is unknown where and how many skeletons were found, because they were not recovered by archaeologists. Thus, these features of the samples considerably limit paleodemographic and bioarchaeological research. During the last three decades, new burials were excavated with rigorous archaeological controls. At the same time, some recent research offered new information based on studies of skeletons recovered decades ago, all of which partially improved the characteristics of the available skeletal samples.

**References Cited**

Alfonso-Durruty, Marta P., Bretton T. Giles, Nicole Misarti, Manuel San Roman, and Flavia Morello

2015 Antiquity and Geographic Distribution of Cranial Modification among the Prehistoric Groups of Fuego-Patagonia, Chile. *American Journal of Physical Anthropology* 158:607–623.

Alfonso-Durruty, Marta, Bretton T. Giles, Manuel San Román, and Flavia Morello

2017 Evaluación de la Variación Fenotípica del Peso, la Forma y la Masa Corporal en Grupos Cazadores-Recolectores Prehistóricos de Patagonia y Tierra del Fuego, Chile. *Chungará* 49(4):623-634. <https://dx.doi.org/10.4067/S0717-73562017005000112>, accessed December 11, 2017.

Barberena, Ramiro

2008 *Arqueología y Biogeografía Humana en Patagonia Meridional*. Sociedad Argentina de Antropología, Buenos Aires.

Borrero, Luis, and Judith Charlin

2010 Arqueología del Campo Volcánico Pali Aike, Argentina. In *Arqueología de Pali Aike y Cabo Vírgenes (Santa Cruz, Argentina)*, edited by Luis A. Borrero and Judith Charlin, pp. 9-30. Dunken, Buenos Aires.

Borrero, Luis, Ramiro Barberena, Nora Franco, Judith Charlin, and Robert Tykot

2009 Isotopes and Rocks: Geographical Organization of Southern Patagonian Hunter-Gatherers. *International Journal of Osteoarchaeology* 19:309-327.

Borromei, Ana M., Andrea Coronato, Mirta Quattrocchio, Jorge Rabassa, Silvia Grill, and Claudio Roig

2007 Late Pleistocene-Holocene Environments in Valle Carbajal, Tierra del Fuego, Argentina. *Journal of South American Earth Sciences* 23:321-335.

Cocilovo, José, and Ricardo A. Guichón

1986 Propuesta Para el Estudio de las Poblaciones Aborígenes del Extremo Austral de Patagonia. *Anales del Instituto de Patagonia* 6:111-123.

De la Fuente, Constanza, Jacqueline Galimany, Brian M. Kemp, Kathleen Judd, Omar Reyes, and Mauricio Moraga

2015 Ancient Marine Hunter-Gatherers from Patagonia and Tierra del Fuego: Diversity and Differentiation using Uniparentally Inherited Genetic Markers. *American Journal of Physical Anthropology* 158:719-729.

Dillehay, Tom D.

1997 ¿Dónde Están los Restos Humanos del Periodo Pleistoceno Tardío? Problemas y Perspectivas en la Búsqueda de los Primeros Americanos. *Boletín de Arqueología PUCP* 1:55-63.

González-José, Rolando, Clara García Moro, Silvia Dahinten, and Miguel Hernández

2002 Origin of Fueguian-Patagonians: an Approach to Population History and Structure Using R Matrix and Matrix Permutation Methods. *American Journal of Physical Anthropology* 14:308-320.

Gusinde, Martín

1982 *Los Indios de Tierra del Fuego. Los Selk’nam*. Centro Argentino de Etnología Americana-CONICET, Buenos Aires.

1986 *Los Indios de Tierra del Fuego. Los Yamana*. Centro Argentino de Etnología Americana-CONICET, Buenos Aires.

Lalueza, Carles, Alejandro Pérez-Pérez, Eva Prats, Lluís Cornudella, and Daniel Turbón

1997 Lack of Founding Amerindian Mitochondrial DNA Lineages in Extinct Aborigines from Tierra de Fuego-Patagonia. *Human Molecular Genetics* 6:41-46.

L’Heureux Lorena, and Tomas Amorosi

2009 El Entierro 2 del Sitio Cañadón Leona 5 Región De Magallanes, Chile). Viejos Huesos, Nuevos Datos. *Magallania* 37(2):41-55.

2010 El Entierro del Sitio Cerro Sota (Magallanes, Chile) a Más de Setenta Años de su Excavación. *Magallania* 38(2):133-149.

L´Heureux, Lorena, and Ramiro Barberena

2008 Evidencias Bioarqueológicas en Patagonia Meridional: el Sitio Orejas de Burro 1 (Pali Aike, Provincia de Santa Cruz). *Intersecciones en Antropología* 9:11-24.

McCulloch, Robert, Michael Bentley, Richard Tipping, and Chalmers Clapperton

2005 Evidence for Late-Glacial Ice Dammed Lakes in The Central Strait of Magellan And Bahía Inútil, Southernmost South America. *Geografiska Annaler* 87A:335-62.

Morello, Flavia, Luis Borrero, Mauricio Massone, Charles Stern, Arleen García-Herbst, Robert Mcculloch, Manuel Arroyo-Kalin, Elisa Calás, Jimena Torres, Alfredo Prieto, Ismael Martínez, Gabriel Bahamonde, and Pedro Cárdenas

2012 Hunter-Gatherers, Biogeographic Barriers and the Development of Human Settlement in Tierra del Fuego. *Antiquity* 86:71-87.

Orquera, Luis, and Ernesto Piana

2009 Sea Nomads of the Beagle Channel in Southernmost South America: Over Six Thousand Years of Coastal Adaptation and Stability. *The Journal of Island and Coastal Archaeology* 4:61-81.

Pallo, María C., and Ivana L. Ozan

2014 Variaciones Demográficas y Climáticas Durante el Holoceno Tardío Final en Magallania. *Comechingonia Virtual. Rev. Electronica Arqueol.* VIII:20-47.

Pérez, Sergio I., Valeria Bernal, and Paula González

2007 Morphological Differentiation of Aboriginal Human Populations from Tierra del Fuego (Patagonia): Implications for South American Peopling. *American Journal of Physical Anthropolog*y 133:1067-1079.

Saletta, María José

2014 Excavando Fuentes. La Tecnología, subsistencia, Movilidad y los Sistemas Simbólicos de Shelk´nam, Yámana/Yaghan y Aonikenk entre los Siglos XVI y XX Analizados a partir de los Registros Históricos y Arqueológicos. PhD dissertation, Facultad de Filosofía y Letras, Universidad de Buenos Aires, Buenos Aires.

Santiago, Fernando, Mónica Salemme, Jorge A. Suby, and Ricardo A. Guichón

2011 Restos Óseos Humanos en el Norte de Tierra del Fuego. Aspectos Contextuales, Dietarios y Paleopatológicos. *Intersecciones en Antropología* 12:147-162.

San Román, Manuel, Omar Reyes, J. Torres Elgueta, and F. Morello

2016 Archaeology of Maritime Hunter-Gatherers from Southernmost Patagonia, South America: Discussing Timing, Changes and Cultural Traditions During the Holocene. In *Marine Ventures - Archaeological Perspectives on Human-Sea Relations*, edited by Hein B. Bjerck, Heidi Mjelva Breivik, Silje E. Fretheim, Ernesto L. Piana, Birgitte Skar, Angélica M. Tivoli, and A. Francisco J. Zangrando, pp. 153-170. Equinox, London.

Steele, James, and Gustavo Politis

2009 AMS 14C Dating of Early Human Occupation of Southern South America. *Journal of Archaeological Science* 36:419-429.

Suby, Jorge A., Leandro H. Luna, Claudia Aranda, and Gustavo Flensborg

2017 First Approximation to Paleodemography of Hunter-Gatherers from Southern Patagonia During Middle-Late Holocene. *Quaternary International* 438:174-188.

Tessone, Augusto

2014 Conductas Mortuorias en el Canal Beagle, Una Visión desde el Registro Etnohistórico y Etnográfico. In *Cazadores de Mar y Tierra. Estudios recientes en Arqueología Fueguina*, edited by Jimena Oría and Angélica M. Tivoli, pp. 149-170. Museo del Fin del Mundo, Ushuaia.

Tivoli, M. Angélica, and Atilio F. Zangrando

2011 Subsistence Variations and Landscape Use Among Maritime Hunter-Gatherers. A Zooarchaeological Analysis from the Beagle Channel (Tierra Del Fuego, Argentina). *Journal of Archaeological Science* 38:1148-1156.

Varela, Hector H., José A. Cocilovo, and Ricardo A. Guichón

1993-1994 Evaluaciones de la Información Somatométrica Por Gusinde Sobre los Aborígenes de Tierra del Fuego. *Anales del Instituto de la Patagonia* 22:193-205.

Zangrando, Atilio F.

2009 *Historia Evolutiva y Subsistencia de Cazadores-Recolectores Marítimos de Tierra del Fuego*. Sociedad Argentina de Antropología, Buenos Aires.