Phytotelmata are structures present in terrestrial plants such as modified leaves, leafaxils, flowers, stem holes or depressions, open fruits and fallen leaves. These structures allow water to impound and are more common in tropical areas where plant diversity and rainfall are higher (Fish 1983). The phytotelmata provide a suitable habitat where immature chironomids are common inhabitants.

In this contribution, the occurrence of the chironomid species *Monopelopia caraguata* Mendes et al. (Chironomidae: Tanypodinae: Pentaneurini) and *Phytotelmatocladius delarosai* Epler (Chironomidae: Orthocladiinae) are reported in Argentina for the first time. A list of the American phytotelmatocladius (Chironomidae: Tanypodinae: Pentaneurini) have been found living in the impounded water of bromeliads (Poales: Bromeliaceae) (Cranston & Epler 2013). Species of *Monopelopia* were reported developing in bromeliads in southern Brazil (Mendez et al. 2003) and in southern Florida (Beck & Roback 1987; Bello et al. 2011). Of the phytotelmatocladius, which are common inhabitants of *Eryngium* in Argentina, *Monopelopia caraguata* (Epler) and *Monopelopia tillandsiae* (Cranston & Epler 2013) were reported developing in bromeliad phytotelmata in southern Florida and Brazil (Epler 2010). Because only female adults and pupae have been collected or reared, this author postulated that this taxon could be parthenogenetic. Immatures of *P. delarosai* were recently collected from the impounded water of *Bromelia balansae* Mez (Bromeliaceae) in a botanical garden at FCAYF-UNLP (Facultad de Ciencias Agrarias y Forestales- Universidad Nacional de La Plata, Buenos Aires, Argentina). This bromeliad species is exotic to this region, being native to Paraguay, Brazil and the northeast of Argentina (Zuloga et al. 2008). Of the reared *P. delarosai*, only female adults emerged, which were maintained in separate vials containing little water. The females laid their eggs which hatched 7 days later; therefore, we confirm the assumption of Epler (2010) that *P. delarosai* could be parthenogenetic.

In the sampling of *Eryngium* plants in FCAYF-UNLP close to *B. balansae* plants, *P. delarosai* was not collected. Besides, *Monopelopia caraguata*, *Metriocnemus eurygortelmatus* and *Polyypedilum parthenogeneticum* were not collected from *B. balansae*, suggesting a possible specificity or preference of those chironomids for each plant species.

Material Examined

*Monopelopia caraguata*: ARGENTINA, Buenos Aires Province, Punta Lara, ex *Eryngium* sp.
| Taxa                              | Host plant                                    | Country   | References                                |
|----------------------------------|-----------------------------------------------|-----------|-------------------------------------------|
| **Orthocladiinae**               |                                               |           |                                           |
| *Orthocladius antecalus*         | *Nidularium innocentii*                       | Brazil    | Pinho et al. 2005                         |
| *Cricotopus sp*                  | *Eryngium elegans*                           | Argentina | Campos 2010                               |
| *Limnophyes sp*                  | *Nidularium innocentii*                      | Brazil    | Pinho et al. 2005                         |
| *Mesosmittia patrihortae*        | *Tillandsia guatemalensis*                    | Honduras  | Mendez et al. 2011                        |
| *Metriocnemus abdominoflavatus*  | *Tillandsia, Billbergia, Catopsis*            | Costa Rica| Picado 1913                               |
| *Metriocnemus edwarsi*           | *Darlingtonia*                                | USA       | Fish 1976                                 |
| *Metriocnemus eryngiotelmatus*   | *Eryngium horridum; E. stenophyllum, E. aff. serra, E. elegans, E. cabrerae, Dipsacus fullonum* | Argentina | Donato & Paggi 2005, Siri et al. 2008a,b, Campos 2010 |
| *Metriocnemus knabi*             | *Sarracenia purpurea*                        | USA to Canada | Bradshaw 1983, Nastase et al. 1995 |
| *Metriocnemus sp*                | *Tillandsia turneri*                         | Colombia  | Osina et al. 2004                         |
|                                 | *Tillandsia guatemalensis*                    | Honduras  | Mendez et al. 2011                        |
|                                 | *Bromeliads, Dipsacus*                       | USA       | Epler 2001, Frank & Fish 2008, Miller 1971 |
|                                 |                                               |           | Baumgartner 1986                          |
|                                 | *Heliamphora spp*                            | Venezuela | Jaffe et al. 1992                         |
|                                 | *Bromeliads*                                  | Costa Rica| Picado 1913                               |
| Orthocladius sp                  |                                               | Brazil    | Sodré et al. 2010                         |
| Orthocladiinae sp               | *Aechmea nudicaulis, Neoregelia concentrica*  | Brazil    | Sodré et al. 2010                         |
| Phytotelmatocladius delarosai   | *Bromelia balansae*                          | Argentina | present study                             |
|                                 | *Bromeliads*                                  | Brazil    | Epler 2010                                |
|                                 |                                               | USA       | Epler 2010                                |
| Tanypodinae                      |                                               |           |                                           |
| *Ablabesmyia costaricensis*      | *Aechmea, Vriesea, Billbergia*                | Costa Rica| Picado 1913                               |
| *Larsia sp*                      | *Eryngium aff. serra, E. elegans, Aechmea distichantha* | Argentina | Campos 2010, pers. obs.                   |
|                                 |                                               |           |                                           |
| Monopelopia caraguata            | *Vriesea splitgerberi*                       | Brazil    | Torreias 2008                             |
|                                 | *Eryngium spp*                                | Argentina | present study                             |
|                                 | *Aechmea nudicaulis, Hohenbergia augusta, *Nidularium innocentii, Vriesea gigantea, V. philippocoburgii, V. vagans* | Brazil    | Mendes et al. 2003, Pinho et al. 2005     |
|                                 | *Solution holes*                              | USA       | Jacobsen 2008, Frank & Fish 2008, Crans- |
| Taxa                         | Host plant                                | Country     | References                                |
|------------------------------|-------------------------------------------|-------------|-------------------------------------------|
| *Monopelopia gesta*          | *Aechmea paniculigera*                    | Jamaica     | Epler & Janetzky 1999, Cranston & Epler 2013 |
| *Monopelopia mickeschwartzi* | *Aechmea paniculigera*                    | Jamaica     | Epler & Janetzky 1999                     |
| *Monopelopia tillandsia*     | *Tillandsia, Catopsis, Hohenbergia*       | Cuba        | Bello et al. 2011                         |
|                              | *Tillandsia utriculata, Tillandsia spp*   | USA         | Beck & Beck 1966, Fish 1976, Frank & Fish 2008 |
| *Monopelopia sp*             | *Bromeliads, Aechmea nudicaulis, Neoregelia concentrata* | Brazil      | Winder 1977, Sodré et al. 2010            |
| *Pentaneura sp*              | *Bromeliads*                              | Puerto Rico | Cranston 2007                             |
|                              | *Helicormia*                              | Costa Rica  | Winder & Silva 1972                       |
|                              | *Bromeliads*                              | Jamaica     | Naeem 1990                                |
|                              | *Bromeliads*                              | Jamaica     | Laessle 1961 (*)                          |
|                              | *Aechmea fendleri, Hohenbergia stellata*  | US Virgin Islands | Miller 1971               |
| *Tanypodinae spp*            | *Aechmea fendleri, Hohenbergia stellata*  | Venezuela   | Liria 2007                                |
| *Chironominae*               | *Aechmea fendleri, Hohenbergia stellata*  | Venezuela   | Liria 2007                                |
| *Chironomus anonymus*        | *Aechmea paniculigera*                    | Jamaica     | Epler & Janetzky 1999                     |
| *Chironomus sp*              | *Bromeliads*                              | Costa Rica  | Picado 1913                               |
|                              | *Bromeliads*                              | Jamaica     | Laessle 1961 (*)                          |
| *Corynoneura sp*             | *Vriesea splitgerberi*                    | Brazil      | Torreias 2008                             |
| *Cryptochironomus sp*        | *Bromeliads*                              | Jamaica     | Laessle 1961 (*)                          |
| *Polypedilum kaingangi*      | *Aechmea lindeni, Canistrum lindeni, Neoregelia laevis, Nidularium innocentii, Vriesea philippocoburgii, V. vagans* | Brazil      | Pinho et al. 2013                         |
| *Polypedilum marcondesi*     | *Nidularium innocentii, Vriesea vagans*   | Brazil      | Saether et al. 2010                       |
| *Polypedilum panacu*         | *Tillandsia guatemalensis*                | Honduras    | Mendes et al. 2011                        |
| *Polypedilum parthenogeneticum* | *Eryngium pandanifolium*               | Argentina   | Donato & Paggi 2008                       |
| *Polypedilum pedipalpus**    | *Bromeliads*                              | Costa Rica  | Picado 1913, Spies et al. 2009            |
| *Polypedilum solimoes*       | *Aechmea lindeni, Canistrum lindeni, Neoregelia laevis, Nidularium innocentii, Vriesea philippocoburgii, V. vagans* | Brazil      | Pinho et al. 2013                         |
| *Polypedilum cf tritum*      | *Aechmea paniculigera*                    | Jamaica     | Epler & Janetzky 1999                     |
| *Polypedilum spp*            | *Eryngium horridum; E. stenophyllum, E. aff. serra, E. elegans, E. cabrerae* | Argentina   | Siri et al. 2008b, Campos 2010            |

*As reported by Epler & Janetzky (1999); due to taxonomic changes and the general difficulty involved in identifying Chironomidae, the preceding names from Laessle (1961) must be viewed with skepticism until the material is re-examined. **Nomina dubia (Saether et al. 2010).
Table 1. (Continued) List of the Phytotelmatous Chironomids in the Americas.

| Taxa                  | Host plant                  | Country  | References                     |
|-----------------------|-----------------------------|----------|-------------------------------|
| *Rheocricotopus* sp   | *Tillandsia turneri*        | Costa Rica | Lichtwardt 1994               |
| *Stenochironomus atlanticus* | *Canistrum lindenii, Neoregelia laevis, Nidularium innocentii, Vriesea philippocoburgii, V. vagans* | Brazil | Pinho et al. 2005, Torreias 2008, Sodré et al. 2010 |
| Tanytarsini sp        | *Nidularium innocentii*    | Brazil   | Pinho et al. 2005             |
|                       | *Tillandsia utriculata*    | USA      | Fish 1976                     |
| *Tanytarsus bromelicola* | *Guzmania berteroniana*    | Puerto Rico | Cranston 2007                 |
|                       | *Tillandsia*               | USA      | Cranston 2007                 |
| *Tanytarsus* sp. nr confusa | *Bromeliads*              | US Virgin Islands | Miller 1971                  |
| *Tanytarsus* sp       | *Vriesea splitgerberi*     | Brazil   | Torreias 2008                 |

*As reported by Epler & Janetzky (1999); due to taxonomic changes and the general difficulty involved in identifying Chironomidae, the preceding names from Laessle (1961) must be viewed with skepticism until the material is re-examined. **Nomina dubia (Sæther et al. 2010).
S 34° 51′ 10″ W 57° 57′ 33″, 7 m asl, adult male reared from larva, 4-VIII-2004, Donato col.; Adult female reared from larva, same data except for Jan 2008; ARGENTINA, Buenos Aires province, Punta Lara, ex Eryngium sp. S 34° 54′ 37″ W 57° 55′ 34″, 14 m asl, adult male reared from larva, 10-IX-2013, Donato & Siri cols.

**Phytotelmatocladus delarosai**: ARGENTINA, Buenos Aires province, La Plata, ex Bromelia balansae Mez at the Jardín Botánico y Arboretum, Facultad de Ciencias Agrarias y Forestales (FCAYF) (UNLP), S 34.912881° W 57.9332227″, adult female reared from larva, collected 9-VIII-2012, emerged 18-VIII-2012, laid their eggs which hatched on 25/26-VIII-2012, Donato & Siri cols.

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**Summary**

The geographic distribution of the 2 phytotelmatous chironomids Monopelopia caraguata and Phytotelmatocladus delarosai is found to extend southward into Argentina, and the occurrence of parthenogenesis in the latter species is corroborated under laboratory conditions.

**Key Words**: Apiaceae, Bromeliaceae, Catopsis, Eryngium, Hohenbergia, Tillandsia, parthenogenesis

**Resumen**

Se extiende la distribución geográfica de las especies fitotelmatísticas Monopelopia caraguata y Phytotelmatocladus delarosai hacia el sur en Argentina, y se corroboran bajo condiciones de laboratorio la ocurrencia de parthenogenesis en esta última especie.

Palabras Clave: Apiaceae, Bromeliaceae, Catopsis, Eryngium, Hohenbergia, Tillandsia, partenogenéosis

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