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Record of the ladybird *Harmonia axyridis* (Coleoptera: Coccinellidae) from Uruguay

Výskyt slunéčka *Harmonia axyridis* (Coleoptera: Coccinellidae) v Uruguayi

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Multicolored Asian Ladybird, distribution, invasion, Uruguay, Neotropical region

Abstract. The ladybird *Harmonia axyridis* (Pallas, 1773) (Coleoptera: Coccinellidae) was introduced as a biological control agent for aphids in several continents, including South America, and has become an invasive species in many countries. It has been reported from Brazil, the states of Paraná and Rio Grande do Sul and from Argentina, specifically Buenos Aires. Here we announce the first record of this species for Uruguay. We found several adults in 2009 and a group of early instar larvae in 2010, strongly suggesting that this species is established in Uruguay.

The harlequin ladybird, *Harmonia axyridis* (Pallas, 1773) (Coleoptera: Coccinellidae), is native to Asia (Kazakhstan to Japan). As a biological control agent for aphids, it was introduced to North America, continental Europe, South America and South Africa. It has become an invasive non-native species in many of these countries and spread beyond those countries to which it was deliberately released. The history of its establishment and spread throughout Europe has been described in detail (Brown et al. 2008).

In South America, *H. axyridis* was introduced to Mendoza at the end of the 1990's. In Buenos Aires (Argentina) *H. axyridis* accounted for 51% to 74% of all ladybirds in 2001–2004 (Saini 2004). This species has also been recorded in the city of Curitiba, State of Paraná, Brazil since 2002 (Martins et al. 2009). The relative abundance of *H. axyridis* in orchard trees was 20–67% (Milléo et al. 2008) of all ladybirds. In the region of Capão do Tigre, Rio Grande do Sul, in the season 2001/2002, it comprised 10% of individuals of coccinellids, in the season 2006/2007 it was the most abundant species (91%). In 2009, *H. axyridis* was already present in the city of Brasilia (Martins et al. 2009).

According to the Climex model, *H. axyridis* may establish in several more countries throughout South America in addition to Brazil and Argentina. For example, it has the potential to establish in Paraguay, Uruguay, Chile, Venezuela, Colombia, Ecuador, Peru and Bolivia (Poutsma et al. 2008). Studies involving the use of molecular genetic markers have demonstrated that the populations of *H. axyridis* spreading in South America originate from invasive populations from Eastern North America, following the invasive bridgehead effect (Lombaert et al. 2010).

Material examined. Uruguay, Canelones district, Progreso, 13.xii.2009, at light, 1 ♂, 2 ♀♀, S. Krejčík lgt. et coll., O. Nedvěd det., see photo on http://www.meloidae.com/displayimage.php?pos=-14744; same locality, 31.xii.2009, at light, 1 ♂, 1 ♀, S. Krejčík lgt. et coll.,

O. Nedvěd det.; same locality, 3.i.2010, group of 42 first instar larvae, siblings from a single egg batch, S. Krejčík obs., O. Nedvěd det., see photo on http://www.meloidae.com/displayimage.php?pos=-15919; same locality, 5.i.2010, at light, 1 ♀, S. Krejčík lgt. et coll., O. Nedvěd det.; Uruguay, Montevideo, 13.i.2010, at light, 1 ♀, S. Krejčík lgt. et coll., O. Nedvěd det. All adults were the colour morph *succinea*. The environment was an abandoned farm reverting to secondary pampas, fruit orchards, bamboo stands. At this time we also observed the following ladybirds: *Cycloneda* sp. (similarly abundant as *H. axyridis*), *Eriopis connexa* Germar, 1824, *Chilocorus* sp. heavily infested with mites, *Hyperaspis* sp.

We conclude that *H. axyridis* is established in Uruguay and we predict that it will spread and become a potential thread to the native ladybird beetles in this region.

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SOUHRN

Slunéčko *Harmonia axyridis* (Pallas, 1773) (Coleoptera: Coccinellidae) bylo vysazeno jako přirozený nepřítel mšic na několika kontinentech a v mnoha zemích se stalo invazním druhem. V rámci Jižní Ameriky je známo z Brazílie, ze států Paraná a Rio Grande do Sul a z Argentiny z Buenos Aires. Zde uvádíme první záznam o výskytu tohoto druhu v Uruguayi. Nalezli jsme asi dvě desítky dospělých jedinců, z čehož sedm je lokalizováno a uloženo ve sbírce, a skupinu čerstvě vylíhlých larev *H. axyridis*, takže považujeme výskyt tohoto slunéčka v Uruguayi za stabilizovaný.