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## A persisting population of an introduced slug, *Milax nigricans*, in Dunkirk, France

JOHN M. C. HUTCHINSON & HEIKE REISE

**Abstract:** A population of *Milax nigricans* was found on February 19<sup>th</sup> 2011 outside a block of flats in Dunkirk, France. It was persisting 21 months later. This is the second finding in the department of Nord. We review earlier occurrences of the species outside its normal range in the Mediterranean and illustrate the most important identification characters.

**Keywords:** Milacidae, *Milax gagates*, identification, invasive species, alien

**Zusammenfassung:** Eine Population von *Milax nigricans* wurde am 19.2.2011 neben einem Wohnblock in Dünkirchen, Frankreich, gefunden und überlebte mindestens die folgenden 21 Monate. Dies ist der zweite Nachweis im französischen Department Nord. Wir geben einen Überblick über frühere Vorkommen der Art außerhalb ihres normalen Verbreitungsgebietes im Mittelmeer-Raum und illustrieren die wichtigsten Bestimmungsmerkmale.

*Milax nigricans* (PHILIPPI 1836) is a very common slug in some parts of the western Mediterranean, including often in synanthropic habitats (e. g. GIUSTI & al. 1995, ABBES & al. 2010). Its presence has been reliably confirmed in North Africa, Malta, Sicily, mainland Italy, Corsica, the Balearic Islands, northern and eastern mainland Spain, southern France, at one site in Croatia and from the Canary Islands (WIKTOR 1987, 1996, CASTILLEJO 1998, KAPPES & al. 2009); we can ourselves confirm its presence in Sardinia (Fig. 1). In addition, the species has occasionally been introduced further north in Europe. Specimens were collected near Bexhill on the south coast of England in about 1948, but never subsequently (ANDERSON 2005). In Munich a population was found near the Großmarkthalle on February 11<sup>th</sup> 1976 and again in 1978, thus implying survival over multiple winters (FALKNER 1990, M. FALKNER pers. comm.). However, a 1983 record from Waldbronn in Baden-Württemberg (SCHMID 1997) should be regarded as unconfirmed because identification was based only on external appearance. MIENIS (2007) found an outdoors population in Hoorn in the Netherlands in 1999, which still persisted in 2006, when he also discovered another population 20 km away. In northern France, *M. nigricans* was found in a garden in Hallennes-les-Haubourdin, near Lille, in 2003, the only locality in a thorough review of records from the departments of Nord and Pas-de-Calais (CUCHERAT & DEMUYNCK 2006). We here report a second locality for *M. nigricans* in the department of Nord.

On February 19<sup>th</sup> 2011 we collected several specimens of *M. nigricans* from a thriving population outside blocks of flats along the Rue de la Ferme, Dunkirk (51.0252° N / 002.3595° E). The species was abundant in bark mulch under exotic bushes planted in the forecourt of the flats; occasional pieces of rubbish provided additional shelters. We noted it at the same site again on November 22<sup>nd</sup> 2012. Specimens from the earlier date are deposited under collection number p17771 in the Senckenberg Museum of Natural History at Görlitz (SMNG). This sample includes both mature and juvenile specimens.

Species identification was based on genital anatomy (Figs. 2, 3; WIKTOR 1987). The best character to distinguish *M. nigricans* from the very similar *Milax gagates* (DRAPARNAUD 1801) is that *M. nigricans* has numerous big papillae on one side of its atrial stimulator (Fig. 2B); in *M. gagates* there are none, or only a few smaller papillae, and these only on the distal half (Fig. 3B, C, E). We have found other identification characters less reliable, including the shape of the stimulator, the position where the vas deference enters the epiphallus, the shape and size of the bursa copulatrix, and the body colour. The stimulator of *M. nigricans* is described as wider at the base than in *M. gagates*, whose stimulator