Abstract
This paper reports the first record of a population of the Neotropical convict cichlid, *Amatitlania nigrofasciata* (Günther, 1867) from Iran, the second record of this species from the Middle East and the only known extant wild population in the region. This new record is based on collection of eight specimens of a leucistic strain of *A. nigrofasciata* taken from Golabi Spring, a fresh warmwater site in the Kol River (Hormuzgan basin). Source of the population is most likely due to releases by local people. Specimens captured included small and large individuals, indicating possible establishment.

Zusammenfassung
Im vorliegenden Artikel werden der Erstnachweis des neotropischen Zebrabuntbarschs *Amatitlania nigrofasciata* (Günther, 1867) für den Iran, zugleich der zweite Nachweis dieser Art für den Mittleren Osten und der einzig bekannte wildlebende Bestand dieser Art in der Region, berichtet. Dieser erneute Nachweis gründet sich auf acht Exemplare einer leukistischen Linie von *A. nigrofasciata*, die im Golabi Spring, einer warmen Süßwasserquelle im Flus Kol (Hormuzgan basin) gefangen worden waren. Ursprung des Bestandes dürfte mit großer Wahrscheinlichkeit eine Freilassung durch dort ansässige Bewohner sein. Zu den gesammelten Exemplaren gehörten sowohl kleine als auch große Exemplare, was auf eine mögliche Stabilisierung des Bestandes hindeutet.

Résumé
Cet article présente le premier relevé d'une population du Cichlide néotropical *Amatitlania nigrofasciata* (Günther, 1867) en Iran, la seconde mention de cette espèce pour le Moyen-Orient et la seule population sauvage qui existe dans la région. Ce nouveau relevé se base sur la collecte de huit spécimens d'une souche leucistique d'A. nigrofasciata dans le Golabi Spring, un site d'eau douce chaude dans la Kol River (bassin d'Hormuz). L'origine de la population est probablement due à des lâchers des habitants locaux.
Iraq (Coad 2011). Carassius auratus is the only widespread ornamental freshwater fish regularly released in the Middle East. Lepomis gibbosus, which was imported as an ornamental fish to Europe, has spread in the Middle East as a weed species in aquaculture facilities from which it escaped into the wild.

Amatitlania nigrofasciata (also appearing in the literature as Cichlasoma nigrofasciata or Archocentrus nigrofasciatus) is another alien fish species which was reported from the Middle East about 20 years ago. It is native to the Pacific slope of Central America, found from Río Sucio, El Salvador, to Río Suchiate, Guatemala, and occurring on the Atlantic slope from Río Patuca, Honduras, to Río Jutiapa, Guatemala (Komar 2009; Matamoros et al. 2009; Ishikawa & Tachihara 2010). Since 1920, this species has been widely introduced, probably all via the ornamental fish trade. Available information indicates Amatitlania nigrofasciata is established or possibly established in the wild in various water bodies in Australia, Austria, Canada, Colombia, Italy, Japan, Mexico, Peru, Philippines, Puerto Rico, Reunion, and the United States, including mainland areas and the Hawaiian Islands (Lever 1996; Fuller et al. 1999; Baptiste et al. 2010; Cossíos 2010; Ishikawa & Tachihara 2010; Piazzini et al. 2010; Pino-Del-Carpio et al. 2010; Scoppettone et al. 2011; Fishbase 2013). In the Middle East, Amatitlania nigrofasciata was first discovered in 1983 in Kibbuzim River in Israel, and observed in the river for about 17 years. It has not been found again since 2000 and seems to be extirpated now (Roll et al. 2007; Goren, pers. comm. 2012).

Fig. 1. Site of introduced A. nigrofasciata in Kol River, Hormuz (Hormuzgan) Basin, Iran. Source of map (Coad, 2013).
Fig. 2. Golabi Spring a headwater of Kol River, Hormuz Basin, Iran. Photo by H. R. Esmaeili

Fig. 3. Amatitania nigrofasciata collected from Golabi Spring at headwaters of Kol River, Hormuz Basin, Iran. Photo by H. R. Esmaeili.
Here we report a new introduction of Amatitlania nigrofasciata in the Middle East.

MATERIALS AND METHODS
Amatitlania nigrofasciata were collected by electrofishing in August 2011 (4 specimens) and in December 2011 (4 specimens) from Golabi Spring, a headwater of Kol River (28°47'18.5"N, 54°22'15.3"E, 1135 m. a.s.l.), near Darab in the Fars Province of southern Iran (Fig. 1). Kol River is one of the major rivers of the exorheic Hormuzgan (Hormuz basin) which drains to the Persian Gulf at Straits of Hormuz and is inhabited by 25 fish species (Esmaeili et al. 2010a). Mehran River is another major river of this basin (Fig. 1). Six of the collected specimens were preserved in 10% formalin, two in 96% ethanol and all were deposited and cataloged in the Zoological Museum-Collection of the Biology Department of Shiraz University (ZM-CBSU), Iran.

RESULTS AND DISCUSSION
This is the first record of this non-native cichlid from natural freshwater bodies of Iran (Golabi spring), the second record from the Middle East and the only record where the species is extant in the wild in the Middle East. Golabi spring (Fig. 2) has a high water temperature all year, 22.8°C was measured in August and 22.4°C in December. The water is typically clear with some green coloration. The spring pool is circular with a depth of less than 1.5 m. The bottom is pebbles, gravel or mud. Phragmitis sp. (Poaceae) and Juncus sp. (Juncaceae) are the dominant riparian vegetation. The spring run is short and has a moderately swift flow, emptying into cemented channels being used for agricultural purposes.

Other fish species found in Golabi Sping are Capoeta saadii, Carasobarbus luteus, Cyprinion microphthalmus, Carassius auratus, Garra persica, Paraschistura sargadensis and Gambusia holbrooki. All of these except C. auratus and G. holbrooki are native to the Golabi spring. The fishing efficiency in the main pool was low due to the deep water of the pool and we could collect only few specimens (4 C. luteus, 4 A. nigrofasciata and 2 C. auratus in 7 Dec. 2011). The presence of large (95.6 mm TL) and small (49 mm TL) convict cichlids in two different visited periods (Aug. and Dec. 2011) show the possible establishment of this species. The identification of the collected cichlids (Fig. 3) was not easy, as they belong to the leucistic strain of A. nigrofasciata. While the wild type of this species has 8-9 black vertical bars on a blue-grey body, along with a dark blotch on the operculum, the fishes of the leucistic strain are just white but have black eyes. Finally, the comparison of these fishes with pictures in the internet (Fishbase 2013) let us identify the cichlids without doubt. Amatitlania nigrofasciata is a very common aquarium fish worldwide and also in Iran.

It has most likely been released by local people. As part of Iranian tradition, people release wild creatures, particularly fish, into the wild during certain festivals (New Year). In the case of fish, many of them are released into freshwater habitats such as rivers, ponds and reservoirs and can thus result in the establishment of non-native fishes in new environments. However, such programs have to be accompanied by a public awareness campaign to ensure that the aquarium trade and hobbyists do not release ornamental fishes into natural habitats. Amatitlania nigrofasciata may cause harm to native fishes as this is an aggressive and territorial species which is well known for its ability to colonize rapidly and it also often carries alien parasites (Wisenden 1994; Bassleer 1997; Martinez et al. 2002). Whether eradication programs can be successful in the case of this species needs to be assessed. In Golabi spring, there is a possible chance of success because of the yet very limited distribution. In fact, this spring is isolated from other waterbodies and the species cannot spread without human help from this spring.

Monitoring to investigate the population status of this non-native cichlid is recommended, because there are impressive records of successful inland fish invasions that have contributed to the loss of native fishes. In order to begin to predict the behavior of an ecosystem when a non-native species is introduced, basic information about indigenous species and their natural history, community structure, and biodiversity of regional systems is essential.

ACKNOWLEDGEMENTS
We would like to thank Shiraz University for financial support and Mr. Karimi for his help in fish collection and Jorg Freyhof for his valuable comments.

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