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THE HERPETOFAUNA OF THE TUNISIAN ISLANDS

SUMMARY

Studies on the herpetofauna of Tunisia's numerous islands and islets began in 2000 thanks to targeted research programs. The data collected were compared and merged with others reported in the literature, thus obtaining an updated and detailed checklist of the Amphibians and Reptiles present on the Tunisian islands.

Key words: Amphibians, Reptiles, checklist, Tunisia, islands.

RIASSUNTO

L'erpetofauna delle isole tunisine. L'erpetofauna di numerose isole e isolotti della Tunisia è stata studiata, a partire dal 2000, nell'ambito di due programmi di ricerca. I dati raccolti, insieme a quelli riportati in letteratura, hanno permesso la stesura di una checklist aggiornata della distribuzione degli Anfibi e dei Rettili sulle isole tunisine.

Parole chiave: Anfibi, Rettili, checklist, Tunisia, isole.

Introduction

Since 2000, several field expeditions have been organized on various Tunisian islands and islets (e.g., La Galite, Zembra, Kuriat, Kerkennah, Kneiss and Djerba) as part of a Life program (Ecosystèmes Insulaires Fragiles de Tunisie, Life TCY97/TN/055) conducted by the Association des Amis des Oiseaux and, subsequently, by an international program organized by the Ini-

tiative PIM (Initiative pour les Petites Iles de Méditerranée), an international NGO for the promotion and assistance in the management of small Mediterranean islands (see at initiative-pim.org) which aims to investigate the islands of the western Mediterranean, including some never explored before. All the data collected have significantly improved the knowledge of the herpetofauna of the Tunisian islands, including the first reports of the presence of *Heremites vittatus* and *Tarentola fascicularis,* and the rediscovery of *Euleptes europaea* in the Galite Archipelago as well as its almost certain extinction on two of its islets.

MATERIALS AND METHODS

Field work on islands was carried out both through VES (Visual Encounters Surveys) and through active search during day and night sessions (see DELAUGERRE, 2008; DELAUGERRE & OUNI, 2008a, 2008b, 2009, 2010; LO CASCIO & RIVIÈRE, 2014, 2016; RIVIÈRE & LO CASCIO, 2014; CORTI, 2015; CORTI *et al.*, 2015). We compiled a database that also includes the data reported in the following papers: D'ALBERTIS, 1878; ISSEL, 1880; BOULENGER, 1891; ESCHERICH, 1896; MAYET, 1903; MERTENS, 1946; LANZA & BRUZZONE, 1959; SCHNEIDER, 1969; PARENT, 1981; NOUIRA, 1986, 2004; BLANC, 1988; BLANC & NOUIRA,1988; SCHLÜTER, 2002; DELAUGERRE *et al.*, 2011; GOBBAA, 2012; RATO *et al.*, 2012; TLILI, 2003; TLILI *et al.*, 2012, 2014.

RESULTS

The updated checklist of the herpetofauna of the Tunisian islands and islets is shown in Fig. 1, Table 1 and species richness in Table 2.

DISCUSSION

The islands of the northern coast of Tunisia are mainly home to Mediterranean species and related Mediterranean chorotypes (*sensu* SINDACO & JEREMENKO, 2008; SINDACO *et al.*, 2013): European-Mediterranean, Western Mediterranean, Turanic-Mediterranean, Mediterranean-Sindic, whilst the N-African chorotype prevails on the eastern Tunisian islands. The herpetofauna of these latter islands shows a certain degree of distinctiveness, although the faunal composition is quite homogeneous and influenced by the nearby mainland, including one amphibian species *Bufotes boulengeri.* As expected, species richness increases with island size and habitat diversity. *Heremites vittatus* is the

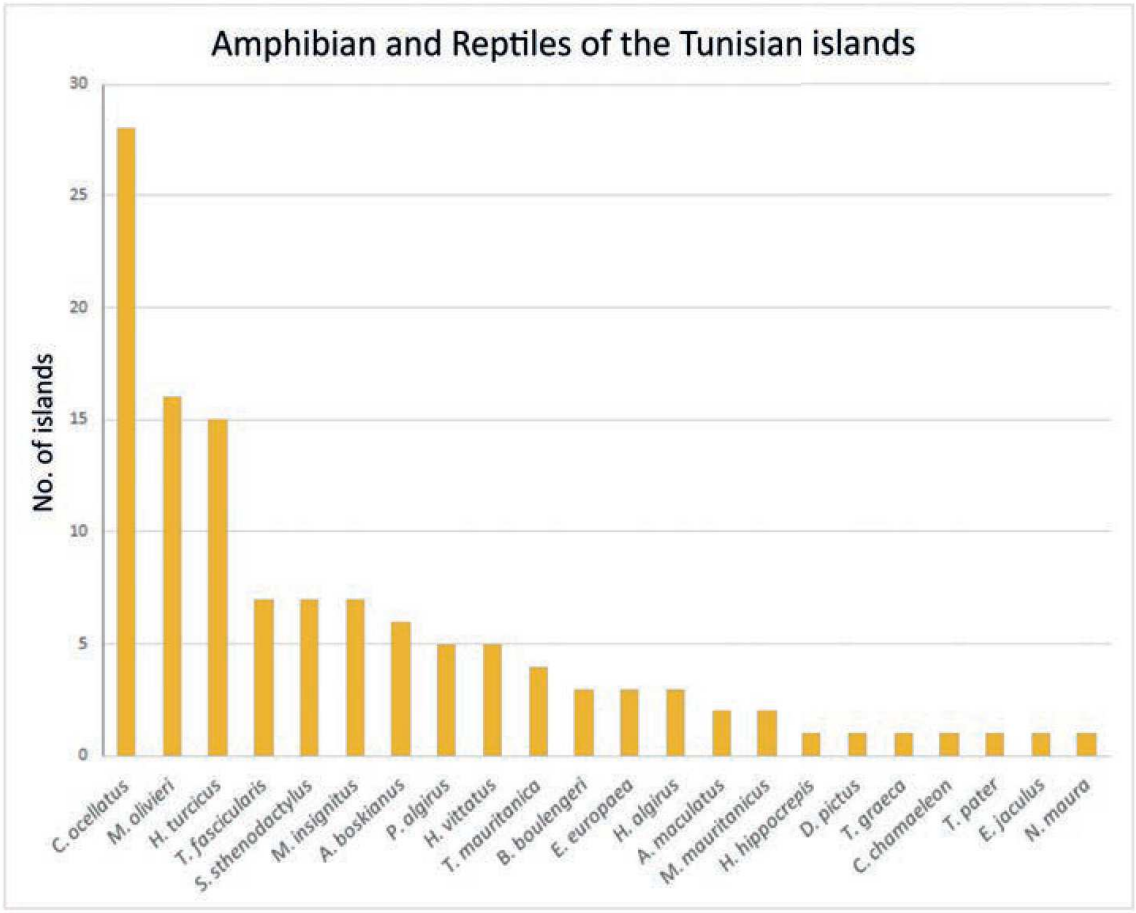

Fig. 1 — Occurrence of the herpetofauna on the Tunisian islands.

Table 1.
List of the herpetofauna of the Tunisian islands and islets; E=extinct.

ARCHIPELAGO/ ISLAND GROUP	ISLAND	SPECIES
La Galite, Tunisia (or Jalta)	Galiton	*Euleptes europaea* [E] *Hemidactylus turcicus* *Chalcides ocellatus* *Psammodromus algirus doriae*
	La Fauchelle (Aguglia)	*Euleptes europaea* *Chalcides ocellatus* *Psammodromus algirus doriae*
	La Galite	*Discoglossus pictus* *Pelophylax saharicus* [introduced but E] *Testudo graeca* *Tarentola mauritanica* *Hemidactylus turcicus* *Chalcides ocellatus* *Timon pater*

		Macroprotodon mauritanicus *Natrix maura*
	Gallina	*Euleptes europaea* *Chalcides ocellatus*
	Gallo	*Euleptes europaea* *Chalcides ocellatus*
Fratelli (or Rchadet Lakhouet)	North Fratelli	*Tarentola mauritanica* *Chalcides ocellatus*
	South Fratelli	*Chalcides ocellatus*
Cani	Cani West	*Hemidactylus turcicus* *Chalcides ocellatus*
	Grand Cani	*Euleptes europaea* [E] *Hemidactylus turcicus* *Chalcides ocellatus*
	Cani East	*Hemidactylus turcicus*
Islands north of Tunisi	Pilau	*Hemidactylus turcicus* (?) *Psammodromus algirus* *Chalcides ocellatus*
	Plane (or El Quatia)	*Hemidactylus turcicus* *Chalcides ocellatus*
Zembra	Zembra	*Hemidactylus turcicus* *Chalcides ocellatus* *Psammodromus algirus* *Hemorrhois hippocrepis* *Macroprotodon mauritanicus* *Malpolon insignitus*
	Zembretta	*Hemidactylus turcicus* *Chalcides ocellatus* *Psammodromus algirus*
	Zembrettino	*Chalcides ocellatus*
Kuriat	Qûrya Essaghira (Small Kuriat or Conigliera)	*Hemidactylus turcicus* *Chalcides ocellatus* *Heremites vittatus* *Malpolon insignitus*
	Qûrya El Kabira (Great Kuriat)	*Hemidactylus turcicus* *Tarentola fascicularis* *Chalcides ocellatus* *Heremites vittatus* *Mesalina olivieri* *Malpolon insignitus* (?)
Monastir Bay	Jbel (Echebba)	*Chalcides ocellatus* *Heremites vittatus*
	El Hmam (or aux Pigeons)	*Hemidactylus turcicus* *Tarentola* sp.
Kerkennah	Gharbi	*Bufotes boulengeri* *Hemidactylus turcicus* *Stenodactylus sthenodactylus* *Tarentola fascicularis* *Chalcides ocellatus* *Acanthodactylus maculatus* *Mesalina olivieri* *Eryx jaculus* *Hemorrhois algirus* *Malpolon insignitus*
	Chergui	*Bufotes boulengeri* *Hemidactylus turcicus* *Stenodactylus sthenodactylus* *Tarentola fascicularis* *Chalcides ocellatus* *Acanthodactylus maculatus* *Mesalina olivieri*

		Hemorrhois algirus *Malpolon insignitus*
	Sefnou	*Hemidactylus turcicus* *Stenodactylus sthenodactylus* *Chalcides ocellatus* *Mesalina olivieri* *Hemorrhois algirus*
	Rakadiya	*Chalcides ocellatus* *Mesalina olivieri*
	Lasdad (or Le Barrage)	*Mesalina olivieri*
	Gremdi	*Hemidactylus turcicus* *Stenodactylus sthenodactylus* *Tarentola fascicularis* *Chalcides ocellatus* *Mesalina olivieri* *Malpolon insignitus*
	Roumadiya	*Hemidactylus turcicus* *Stenodactylus sthenodactylus* *Chalcides ocellatus* *Heremites* cfr. *vittatus* *Mesalina olivieri*
	Gharsa (El Gharsa, Ilot du Jardin)	*Mesalina olivieri*
	Keblia	*Mesalina olivieri*
	Jeblia (El Hadj Hamida, Haj Hamida)	*Mesalina olivieri*
Kneiss	El Bessila (Great Kneiss)	*Stenodactylus sthenodactylus* *Heremites vittatus* *Acanthodactylus boskianus* *Malpolon insignitus*
	El Laboua	*Chalcides ocellatus*
	El Gharbia North	*Chalcides ocellatus*
	El Gharbia South	*Chalcides ocellatus*
Djerba	El Gataia el Bahria	*Tarentola fascicularis* *Stenodactylus sthenodactylus* *Chalcides ocellatus* *Acanthodactylus boskianus* *Mesalina olivieri*
	Djerba	*Bufotes boulengeri* *Chamaeleo chamaeleon* *Tarentola fascicularis* *Stenodactylus sthenodactylus* *Chalcides ocellatus* *Acanthodactylus boskianus* *Mesalina olivieri* *Haemorrhois hippocrepis* *Malpolon insignitus*
	Dzira (or Ilot de Borj Jilidj)	*Tarentola* cfr. *mauritanica* *Chalcides ocellatus* *Acanthodactylus boskianus* *Mesalina olivieri*
	El Gataia el Gueblia	*Tarentola* cfr. *mauritanica* *Chalcides ocellatus* *Acanthodactylus boskianus* *Mesalina olivieri*
	Ras Jlij (or Tachlissa)	*Chalcides ocellatus* *Acanthodactylus boskianus* *Mesalina olivieri* *Malpolon insignitus*

Table 2.
Species richness of the Tunisian insular herpetofauna.

	N species Tunisian islands	Family composition	N species Tunisia (NOUIRA, 2012)
Amphibians	**2**		**7**
Anura		Bufonidae (1) Discoglossidae (1)	
Reptiles	**20**		**60**
Testudines	1	Testudinidae (1)	
Sauria	13	Chamaeleonidae (1) Gekkota (5) Lacertidae (5) Scincidae (2)	
Ophidia	6	Boidae (1) Colubridae (5)	
TOTAL N	**22**		**67**

most frequent species on the Kuriat islands; the syntopy of *Heremites vittatus* and *Chalcides ocellatus* on the islet of Jbel is noteworthy, given the scarce trophic resources available on such a small island. In the Kerkennah Archipelago, *Mesalina olivieri* was observed on all the islands and islets where the minimum necessary surface and habitat were available. On the Kneiss islands, as opposite to the other groups of islands, *Mesalina* was not observed, while the Scincidae are always represented. The small satellite islets of Djerba are home to at least 4 species despite their relatively small area. *Euleptes europaea* is absent in mainland Tunisia (and in Maghreb), however it is still present on three islands of northern Tunisia while it became extinct on two.

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