CONTRIBUTION TO THE STUDY OF THE SNAKES OF FRENCH GUYANA III

The presence of Chironius exoletus (Linnaeus, 1758) in French Guyana

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■ INTRODUCTION

The genus *Chironius* contains thirteen species and seven subspecies, all neotropic (Dixon, Wiest, Cei, 1993). These snakes have a slender body, the head is separated from the body. The eye is large, the pupil round, the tail is long and narrow. Depending on the species the tail comprises 29-39% of the total body length (these figures were obtained from 22 specimen). The snakes belong to the group of aglyfe colubrids with a single sperm groove (Chippaux, 1987).

Scalation of the head is of the classical type. The loreal scale is present as well as two pairs of long, unequal throat scales. The dorsal scales are smooth or keeled with an apical pit and divided over the middle of the body in eight to twelve diagonal rows. The anal scale is divided or undivided, the subcaudals are divided.

The menu of these species consists of frogs as well as small mammals, lizards and, to a lesser extent, also birds. They are terrestrial and semi-arboreal snakes and are active during the day.

Usually four species are mentioned for French-Guyana (Chippaux, 1987).

Chironius carinatus (Linnaeus, 1758);
Chironlus fuscus (Linnaeus, 1758);
Chironius multiventris Schmidt and Walker, 1943.1
Chironius scurrulus (Wagier, 1824).

A new species that was collected during one of the many expeditions in the West and East of the country brings the total number of representatives of the genus *Chironius* in French-Guyana to five. This new species is *Chironius exoletus* (Linnaeus, 1758). It was described for the first time by Chippaux (1987), although he related this species to *Chironius carinatus*.

Initially Linnaeus described *Chironius exoletus* as a separate species; later she became synonymous with *Chironius carinatus*, to be re-enstated by Hoge *et al.* (1977, cited by Chippaux, 1987). Recently the revisions of Dixon, Wiest and Cel (1983) resulted in a separate status for this species.

■ *CHIRONIUS EXOLETUS* (LINNAEUS, 1758)

Coluber exoletus Linnaeus, 1758: 223; *Chironius exoletus* Hoge and Cordeiro, 1978: 41; Abuys, 1982: 232; Chippaux, 1987, 46; Pérez-Santos and Moreno, 1988: 113; Pérez-Santos and Moreno, 1990: 110; Dixon, Wiest and Cel, 1993: 92.

■ INVESTIGATED MATERIAL

For French-Guyana: two specimen, caught alive at the edge of the forest. One in the vicinity of kilometre mark 12 on the CD 9; one on the road to Kaw, near kilometre mark 24. One road-killed male on the CD 9 near kilometre mark 15; one roadkilled female on 500 metres of the entrance to the road to Fatima, near St.-Laurent du Maroni.

■ DESCRIPTION

Chironius exoletus resembles *Chironius multiventris* and *Chironius carinatus*, species with whom she was sometimes confused (Beebe 1946; 21; cited by Dixon, Wiest and Cei, 1993), although her markings are quit characteristic and allow an easy identification.

The body is greenish-brown and shows small yellow spots that are irregularly spread over the back and the sides (see Photos). The head and the supralabials are light-brown. The infralabials and the throat are bright-yellow; the sides of the body are greenish-yellow to brown. The ventral scales are light green-yellow in contrast to those of <I>Chironius carinatus<I> that are clearly yellow to bright orange (see Photos). The subcaudals are divided and the partition is bordered by a dark line. The eyes are gray, the tongue is pink to red.

■ CHARACTERISTIC SCALATION

Remark:

in both males and females the first two rows of paravertebral scales are keeled. In the males however, these are more clearly visible which is an easy-to-use sexual dimorphism. On almost all scales in the neck one can notice the presence of a small apical pit.

Dixon, Wiest and Cei gave the following variations in scalation for this species: 123 to 162 ventrals (131-162

Head

loreal	Present	**supralabials**	9 (4 - 5 - 6) or 9 (4-5)
preoculair	1	**Infralabials**	10 (5) or 11 (5)
postoculair	2	**similarTemporals**	1+2 or 1 +1

Body

Dorsals	12-110 to 12-8, diagonal	**Ventrals**	123-162
Smooth	x	**Anal scale**	Divided
Keeled	X 2equal rows	**Subcaudals**	11-160, Divided
Apical grooves	Present		

Photo by F. Starace

Chironius exoletus.

for the males, 123-155 for the females) and 111 to 160 subcaudals (118-160 for the males, 111-154 for the females). In French-Guyana these differences were established from four female specimen: 145to155 ventrals and 126 to 143 subcaudals; the only male caught had 145 ventrals and 140 subcaudals.

Our specimen measured an average of 1300 to 1500 mm (max. 1600 mm, Starace, personal communication; 1545 mm, Dixon,Wiest and Cei, 1993). Two of the female specimen measured a total lenght of 1600 and 151 0 mm of which respectively 562 and 545 mm were accounted for by the tail. A third, much smaller specimen measured 1130 mm, with 387 mm for the tail. A fourth, male specimen measured 1235 mm, the tail measured 464 mm. The last two specimen will be deposited at the MNHNP. In *Chironius exoletus* the tail comprises 34 to 37% of the total body length (on average 36% in four specimen).

The presence of this new species of *Chironius* in French-Guyana makes the present identification key useless (Chippaux, 1987). In view of the above I therefor suggest the following key:

identification key of Chironius species in French-Guyana,

1 Anal scale undivided..... **2**
Anal scale divided..... **3**

2 Dorsals smooth, 152 to 158 ventrals
mainly chestnutbrown colour (> 650 mm);
light green colour (- 650 mm).....
.....***Chironius scurrulus***
keeled scales in the male;
138 to 149 ventrales.....***Chironius fuscus***

3 more then 180 ventrals....***Chironius multiventris***

123 to 162 ventrals:
colour dark green to black; ventral side bright yellow-orange; yellow orange spots present at the dorsal-ventral border.....***Chironius c. carinatus***

146 to 167 ventrals.' colour greenish-brown.'
ventral side light yellow-green.....
.....***Chironius exoletus***

■ ECO-ETHOLOGIE

This snake is diurnal, terrestrial and clearly semi-arboreal. As I have seen for myself, she hunts for frogs (*Hyla punctata, Hyla rubra*) and lizards *(Anolis* and *Hemidactyius* spp.) in the bushes and on the border of the woods up to a height of 3.5 meters. One specimen was caught by M. Neuhaus around 10.30 a.m. at the edge of an old secondary forest. The animal was found on a branch at a height of 2.5 meters. Another animal was seen around 3 p.m. at the edge of the 'cirque Margot' - a local name which means something like waterhole - while.it was moving along branches at a height of about 1,5 to 2 meters. They show their greatest activity during the morning between 8.30 and 11 a.m.

Photo by F. Starace

Chironius exoletus.

When hindered or threatened she flattens her head, which becomes clearly triangular, inflates her body to such an extent that the white between the scales becomes visible, after which she attacks with her mouth wide-open. Thereby she seems to lift her complete body from the ground. This very impressive way of intimidating stops the moment she gets the chance to escape. Although she is quit happy to bite she does not chew on the hand that holds her; she soon relaxes, in contrast to for instance snakes of the genus *Spilotes*. On several occasions M. Neuhaus observed some quit interesting behaviour (personal communication). If one tries to catch the snake while it is moving in the bushes, it drops to the ground and flees. Personally I have also observed this behaviour. Also all caught animals showed an abundant production of saliva, the saliva does not seem to be poisonous but I do not have enough information to explain the phenomenon.

■ CONCLUSION

The distribution area of *Chironius exoletus* covers the Brazilian Amazon area, the North-East of Argentinia, Bolivia, Peru, Equador, the South-East of Colombia, the South-East and East of Venezuela, Guyana, Surinam and, from now on in accordance with the proposed map of Dixon, Wiest and Cei (1993), also French-Guyana. I have collected the majority of my specimen (5) in the West of the Departement, in the area of St.-Laurent and Mana, and one on a path near Kaw (East). This shows that she is present throughout the whole coastal area of Guyana. Additional observations and data will be needed to confirm her presence in the whole of Guyan

ANNOUNCEMENTS

■ ERRATUM

Unfortunately some errors appeared in the recent articles by Fausto Starace:

Volume 17, issue no. 5:

Pg 97: The snake on the photo is *Dipsas pavonina* and not *Dipsas catesby*.

pg 98: The snake on the photo is *Dipsas catesby (juvenile)* and not *Dipsas pavonina*.

Volume 18, issue no. 1:

pg 15: The snake on the photo is *Chironius carinatus* and the photo is taken by A. Halimi.

■ SNAKES AND AMPHIBIANS OF GUYANA

Recently "Guide des serpents et amphisbènes de Guyane" by F. Starace appeared, 452 pg, 179 photo's, with an abstract in English for each species. Price 415 FF.

The book can be ordered directly from the author by sending your name and address, together with an International Money Order to:
M. Starace fausto, 3 Rue Desaix,
78800 Houilles, France.