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Occurrence of Anchor Coralsnake, *Micrurus ancoralis* (Jan, 1872) (Squamata: Elapidae) confirmed in the Magdalena River Valley of Colombia, with novel citizen science distribution records

Presencia de la Coral Ancla *Micrurus ancoralis* (Jan, 1872) (Squamata: Elapidae) confirmada en el valle del río Magdalena, Colombia, con novedosos registros de distribución contribuidos por la ciencia ciudadana

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RESUMEN

Confirmamos la presencia de la Coral Ancla, *Micrurus ancoralis* (Jan, 1872), en los bosques tropicales de la vertiente oriental de la Cordillera Central de Colombia en el valle del Río Magdalena. Esto se logró mediante la revisión de un ejemplar de museo proveniente del departamento del Tolima y nuevos registros en los departamentos de Antioquia y Caldas de la plataforma de ciencia ciudadana iNaturalist.

Palabras clave: ciencia comunitaria, Elápidos, nuevos registros, ocurrencia de serpientes, plataforma iNaturalist.

ABSTRACT

We confirm the occurrence of the Anchor Coralsnake, *Micrurus ancoralis* (Jan, 1872), in the tropical forests of the eastern slopes of the Central Cordillera of Colombia in the Magdalena River Valley. This was achieved through the examination of a museum specimen from the department of Tolima and new records for the departments of Antioquia and Caldas from the citizen science platform iNaturalist.

Keywords: community science, Elapids, iNaturalist platform, new records, snake occurrence.

INTRODUCTION

Most of The New World Coralsnakes (*Micrurus* spp.) are not abundant in nature, being difficult to find due to their semi-fossorial habits (Roze 1996). Information regarding the biology, venom, and distribution of several species or species groups is limited, and the knowledge of reptile distribution in Colombia is still incomplete (Campbell & Lamar 2004). The Anchor Coralsnake, *Micrurus ancoralis*, belongs to the South American triad-bearing group and is one of the largest *Micrurus* species, where lengths of up to 151 cm have been reported (Campbell & Lamar 2004). This species ranges from the Darién region in southeastern Panama to the western slopes of the Andes in southwestern Ecuador (Roze 1996), inhabiting tropical rainforest and low montane wet forest from near sea level up to about 2000 m asl (Campbell & Lamar 2004, Rodríguez-Guerra 2020). Two subspecies are recog-

nized: *M. ancoralis ancoralis* (Jan 1872) and *M. ancoralis jani* Schmidt 1936 (see Roze 1996). *Micrurus a. jani* is found from eastern Panama through the Pacific lowlands of Colombia to the Río Saija drainage, where it intergrades with *M. a. ancoralis*, which ranges southward into northwestern Ecuador (Roze 1996, Campbell & Lamar 2004). Although, there is little knowledge about the natural history of *M. ancoralis*, it is classified as Least Concern (LC) on the IUCN Red List (Ibáñez *et al*. 2017).

The known distribution of *Micrurus ancoralis* in Colombia covers the Pacific lowlands and western slope of the Western Cordillera in the departments of Antioquia, Cauca, Chocó, Nariño, Risaralda, and Valle del Cauca (Roze 1996, Wallach *et al*. 2014). Additionally, Llano-Mejía *et al*. (2017) reported this species for the department of Tolima but gave no detailed information, i.e. without an exact date, locality, photograph, or specimen voucher. For this reason, the occurrence of this species in the Magdalena Valley was doubtful. Nonetheless, there is one specimen collected in 1990 from San Sebastián de Mariquita (Tolima) by one of us (Juan Manuel Renjifo) currently deposited in the Reptile Collection of the Instituto Humboldt. A photograph *in vivo* of this specimen appears in Campbell & Lamar (2004. Plate 219); however, they were unable to obtain much information at the time beyond the fact that it was from Colombia (William W. Lamar *com. pers*., 2024). Here, we examine that specimen and complete the gap in the distribution of *Micrurus ancoralis* in the Magdalena valley of the Central Cordillera, with new records for the departments of Antioquia and Caldas from the citizen science platform iNaturalist.

The specimen IAvH-R-7332, corresponds to a juvenile of indeterminate sex from Vereda La Maria, km 82 road Mariquita-Falan, San Sebastián de Mariquita municipality, Tolima department, Colombia (Approximate coordinates: 5.180791°N, 74.881952°W, WGS 84; ~451 m asl.), collected by Juan Manuel Renjifo on August 25, 1990. The specimen was identified as *Micrurus ancoralis* based on being the only triad-type coralsnake that has a red head with a nearby distribution with a characteristic anchor-shaped black marking in the head formed by the black nuchal band projecting onto the parietals (Fig. 1).

The four citizen science records in the iNaturalist platform clearly correspond to *Micrurus ancoralis* identified by being large coralsnakes with a pattern of triads and a red head with a characteristic anchor-shaped black marking (Fig. 2). More photographs of the individuals are available online, see appendix. The observations are:

1. Inaturalist ID: 185091716 corresponds to a female specimen of *Micrurus ancolaris* observed by Miguel Alejandro Pabon Arboleda at approximately 1648 h on 27 February 2022, in Samaná municipality, department of Caldas, Colombia (5.384627°N, 74.951486°W, WGS 84; 828 m asl.). This specimen was found road-killed (Fig. 2A) in a peri-urban zone surrounded by fragmented tropical forest.
2. Inaturalist ID: 140615670 corresponds to a male specimen (Fig. 2B) observed by Diego Rios Montoya at 1100 h on 02 October 2022, in the municipality of San Francisco, department of Antioquia, Colombia (5.948095°N, 75.080275°W, WGS 84; 1139 m asl.). The specimen appeared in a road of Vereda Cañada Honda, in a peri-urban zone surrounded by fragmented tropical forest.
3. Inaturalist ID: 139714234 corresponds to an adult specimen (Fig. 2C) observed by Juan Camilo Mora at approximately 0815 h on 22 October 2022, in the municipality of Remedios, department of Antioquia, Colombia (7.21074°N, 74.496178°W, WGS 84; 601 m asl.). The specimen was found in a peri-urban construction zone surrounded by cattle-grazed savannah and fragmented tropical forest.
4. Inaturalist ID: 186001626 corresponds to an adult specimen observed by Oscar Vergara at approximately 1900 h on 1 December 2022, in the municipality of Cocorná, department of Antioquia, Colombia (5.887225°N, 75.146622° W, WGS 84; 1044 m asl.). The specimen was killed inside a house (Fig. 2D) in Vereda Santa Rita, a place surrounded by fragmented tropical forest.

The individuals of *Micrurus ancoralis* mentioned here represent new distribution records for the Middle Magdalena basin in Antioquia department and a new departmental record for Caldas department (Fig. 3). The specimen IAvH-R-7332 aligns with the scale count variation known for *Micrurus ancoralis* as proposed by Roze (1996) and Campbell & Lamar (2004). It was also possible to count the number of triads in all specimens with additional material provided by the authors of the observations, which corresponds to the established variation of *Micrurus ancoralis* (Table 1). Additionally, these specimens correspond to *M. ancolaris jani* based on the distribution range and key to the subspecies in Roze (1996). The subspecies *M. a. jani* intergrades with the nominal species *M. a. ancoralis* in the upper Saija River drainage, Cauca department, Colombia (Roze 1996), although the diagnosis of the subspecies is poor and needs to be reviewed.

In the recent years, citizen science has been useful in expanding the knowledge of reptiles and other taxa (Angarita-Sierra *et al*. 2022). Specifically, in Colombia, it has been employed to enhance knowledge about the distribution of snakes (Angarita-Sierra *et al*. 2022, Díaz-Floréz *et*

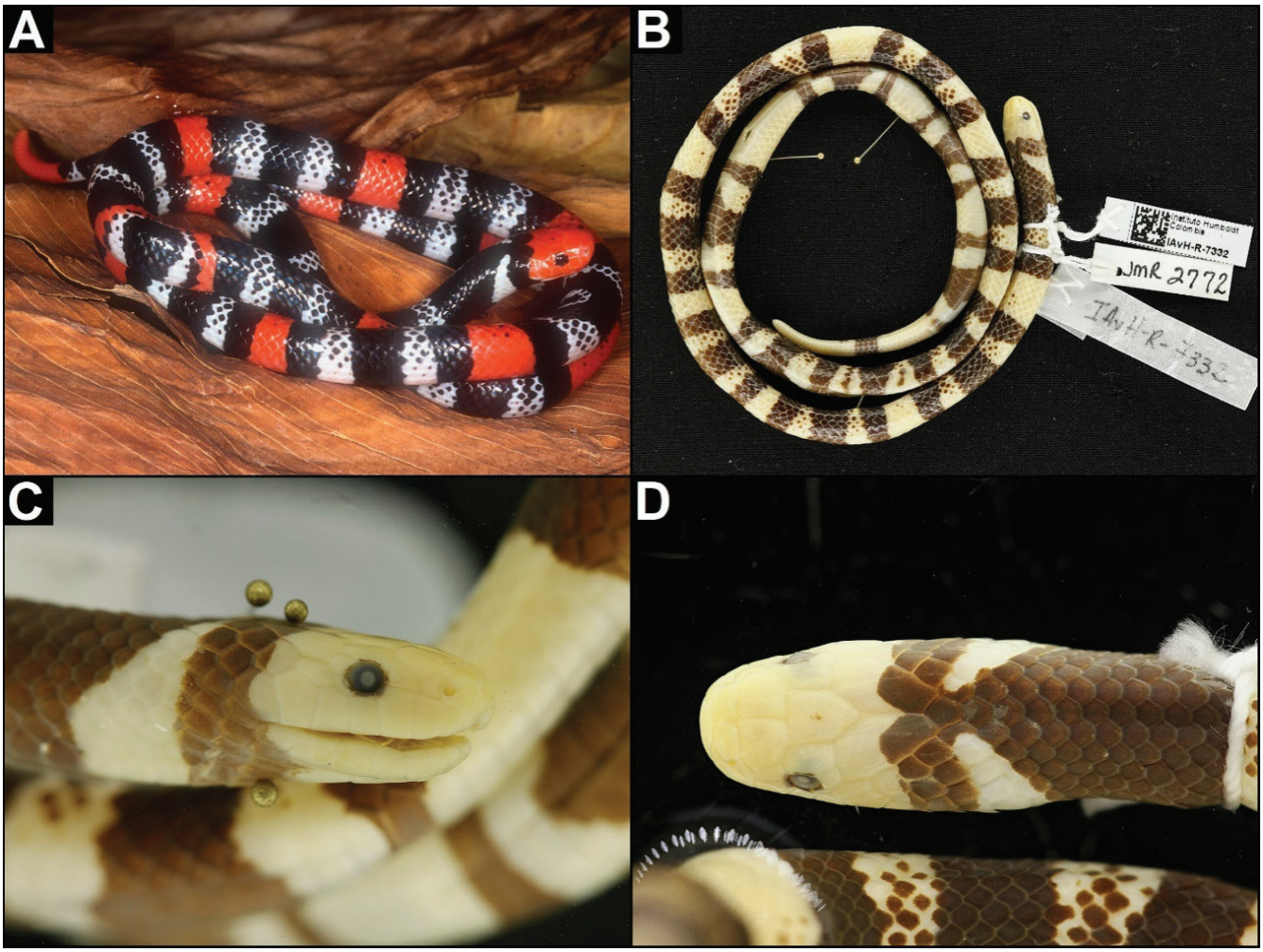

Figure 1. Specimen IAvH-R-7332, juvenile of *Micrurus ancoralis* from San Sebastián de Mariquita municipality, Tolima department, Colombia. **A.** Photograph *in vivo*. **B.** General view of the specimen deposited in the reptile collection of the Instituto de Investigaciones de Recursos biológicos Alexander von Humbolt. **C-D.** Lateral and dorsal view of the head. Photograph A by Juan Manuel Renjifo; photographs B-D Courtesy of the Reptile Collection of the Instituto de Investigaciones de Recursos biológicos Alexander von Humbolt.

al. 2022, Himes *et al*. 2022). The new records of *Micrurus ancoralis* discussed in this work indicate the presence of a fourth species of the genus *Micrurus* in the Middle and Upper Magdalena Valley, alongside *Micrurus camilae* Renjifo & Lundberg 2003, *Micrurus dumerilii* (Jan 1858) and *Micrurus mipartitus* (Duméril, Bibron & Duméril 1854) (see Campbell & Lamar 2004, Meneses-Pelayo & Caballero 2019). Llano-Mejía *et al*. (2017) reported the presence of *Micrurus bocourti* (Jan 1872) in Tolima, but without supporting information such as a photograph, specimen voucher, or locality details. Therefore, we consider it an error, as this species is only known to inhabit the Pacific lowlands of Ecuador and northwestern Peru (Campbell & Lamar 2004).

All congeners mentioned (except for *M. camilae*) occur throughout the Pacific versant and the Magdalena Valley of Colombia. Different authors have associated these areas based on biogeographical analyses of terrestrial plant and animal taxa, which helps to understand the distribution pattern of *M. ancoralis*. Hernández-Camacho *et al*. (1992), classified both as the Chocó-Magdalena biogeographic province in '*Unidades biogeográficas de Colombia*', and Morrone (2014) in '*Biogeographical Regionalization of the Neotropical region*' classified the Magdalena province as part of the Pacific dominion. The distribution pattern of *M. ancoralis* is also observed in other snakes, such as *Atractus clarki*, *Bothrops punctatus*, *Chironius grandisquamis*, *Coniophanes fissidens*, *Corallus annulatus*, *Dendrophidion clarkii*, *Enuliophis sclateri*, *Geophis nigroalbus*, *Imantodes inornatus*, *Lachesis acrochorda*, *Ninia teresitae*, *Rhadinaea decorata*, *Rhinobothryum bovallii*, *Sibon annulatus* and *Tantilla alticola* (McCranie 2004, Passos *et al*. 2009, Me-

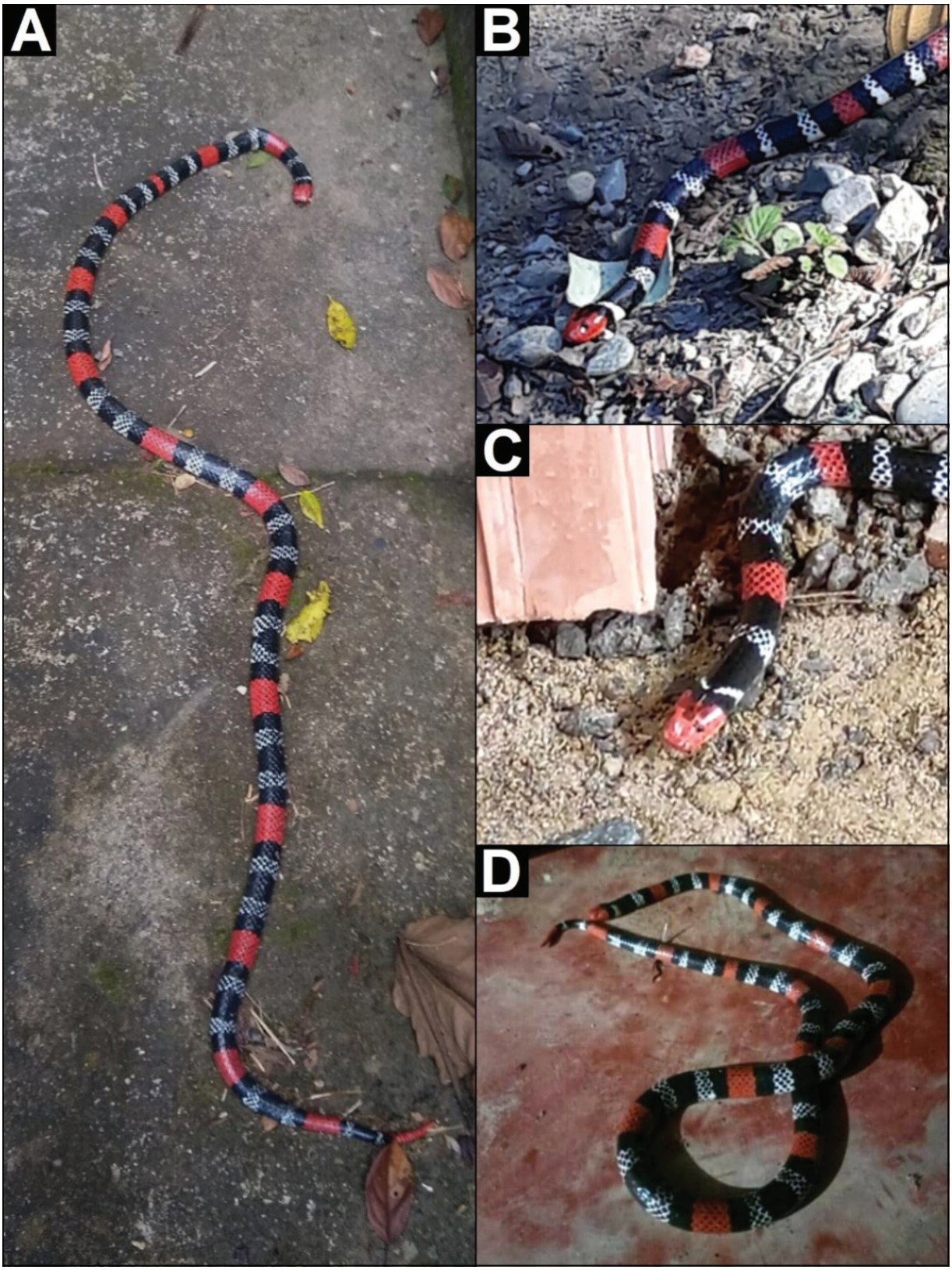

Figure 2. Citizen science records of *Micrurus ancoralis* in the Magdalena Valley. **A.** Female specimen road-killed from Samaná, Caldas. **B.** Male specimen from San Francisco, Antioquia, Colombia. **C.** Adult specimen from Remedios, Antioquia. **D.** Adult specimen killed out of fear from Cocorná, Antioquia. Photographs by Miguel Alejandro Pabon Arboleda (A), Diego Rios Montoya (B), Juan Camilo Mora (C), and Oscar Vergara (D).

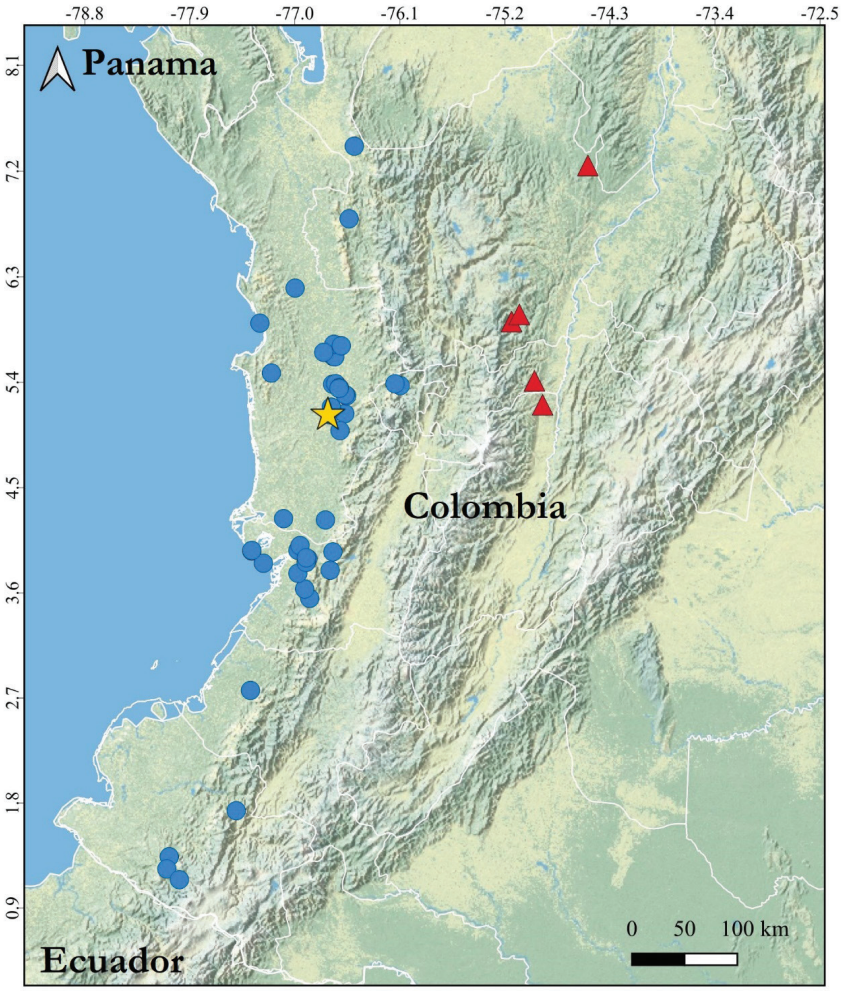

Figure 3. Distribution map of *Micrurus ancoralis* in Colombia. Red triangles correspond to records in the middle and upper Magdalena Valley discussed in this work. Blue dots correspond to collection vouchers, literature records, and citizen science records. Yellow star represents the type locality of *M. a. jani*. Basis of locality records appear in appendix.

Table 1. Morphological data of the *Micrurus ancoralis* specimens examined in this work in contrast with information from the literature.

Reference material		Sex	Ventral scales	Subcaudal scales	Temporal scales	Body triads	Tail triads
Roze (1996); Campbell & Lamar (2004)		Male	242-262	31-37	1 + 1 (rarely 1+2)	12-20	1-2 (1 + incomplete)
		Female	266-290	28-35		14-21	
This work	IAvH-R 7332	unknown	251	32	1 + 1	14 + incomplete	1
	iNaturalist ID: 185091716	Female	—	—	—	14	1
	iNaturalist ID: 140615670	Male	—	—	—	13	2
	iNaturalist ID: 139714234	Unknown	—	—	—	15	2
	iNaturalist ID: 186001626	Unknown	—	—	—	15	1

neses-Pelayo *et al*. 2016, Angarita-Sierra & Lynch 2017, Echavarria-Renteria *et al*. 2018, Parra-Hernández *et al*. 2019, Vásquez-Restrepo & Toro-Cardona 2019, García-Cobos *et al*. 2020, Santana-Londoño *et al*. 2021, Rojas & Marín-Martínez 2022, Meneses-Pelayo 2023).

The expansion of the distribution of *Micrurus ancoralis* reflects the need to preserve the tropical forests of the eastern slopes of the Central Cordillera. Nevertheless, our work indicates that this species may inhabit disturbed areas with fragmented tropical forest in Colombia. Furthermore, there is a need to raise awareness about this species. Despite being classified as Least Concern (LC) on the IUCN Red List (Ibáñez et al. 2017), it is frequently killed by humans either out of fear or in road accidents, as illustrated in this work (Fig. 2). The absence of voucher specimens in museums from the Magdalena Valley can be attributed to the general habits of coralsnakes, which makes them difficult to find and collect in nature. Nonetheless, as more fieldwork is conducted in the humid tropical forests of the middle and upper Magdalena Valley, museum vouchers of *Micrurus ancoralis* will likely increase.

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Appendix. Locality records of *Micrurus ancoralis* in Colombia. Reference and voucher/evidence data on all specimens.

Locality	Department	Latitude	Longitude	Reference	Basis of record	Voucher/Link
Cocorná, Vereda Santa Rita	Antioquia	5.887225	-75.146622	This work/ iNaturalist community 2023	Human observation	https://www.inaturalist.org/observations/186001626
Dabeiba, camino a Chontaduro	Antioquia	6.758635	-76.53181	GBIF [gbif.org]. 2023	Preserved specimen	IAvH-R 6072
San Francisco	Antioquia	5.948095	-75.080275	This work/ iNaturalist community 2023	Human observation	https://www.inaturalist.org/observations/140615670
Remedios	Antioquia	7.210740	-74.496178	This work/ iNaturalist community 2023	Human observation	https://www.inaturalist.org/observations/139714234
Mutatá, Villa Arteaga	Antioquia	7.373472	-76.487861	GBIF [gbif.org]. 2023	Preserved specimen	FMNH 78107
Samaná	Caldas	5.384627	-74.951486	This work/ iNaturalist community 2023	Human observation	https://www.inaturalist.org/observations/185091716
Quebrada Guanguí, about 0,5 km above its junction with Río Patía, 100 - 200 m. elevation, in upper Río Saija drainage, Department of Cauca	Cauca	2.749655	-77.37261	Pérez-Santos & Moreno 1986	Literature record	—
Alto Baudó, La Victoria	Chocó	5.450278	-77.194167	GBIF [gbif.org]. 2023	Preserved specimen	COLZOOCH-H 3352
Andagoya, Medio San Juan	Chocó	5.098576	-76.697307	GBIF [gbif.org]. 2023	Preserved specimen	IAvH-R 6770
Andagoya	Chocó	5.095460	-76.712850	Schmidt 1937	Literature record (*M. a. jani* holotype)	MCZ 32722
Andagoya	Chocó	5.096580	-76.696300	Schmidt 1936	Literature record (*M. a. jani* paratype)	MCZ 11151
Andagoya	Chocó	5.096580	-76.696300	Schmidt 1937	Literature record (*M. a. jani* paratype)	MCZ 13270
Andagoya	Chocó	5.095460	-76.712850	Schmidt 1936	Literature record (*M. a. jani* paratype)	MCZ 32720-21
Andagoya	Chocó	5.095460	-76.712850	Schmidt 1937	Literature record (*M. a. jani* paratype)	MCZ 32723
Andagoya, at junction of River Condoto and San Juan	Chocó	5.095523	-76.696583	Schmidt 1936	Literature record (*M. a. jani* paratype)	NHMUK 1946.1.21.13-15
Andagoya, Medio San Juan	Chocó	5.098576	-76.697307	GBIF. OrgGBIF [gbif.org]. 2023	Preserved specimen	IAvH-R 6770

Appendix. (*Continuation*).

Locality	Department	Latitude	Longitude	Reference	Basis of record	Voucher/Link
Atrato, Samurindó	Chocó	5.587500	-76.654167	GBIF [gbif.org]. 2023	Preserved specimen	COLZOOCH-H 0309
Atrato, Samurindó	Chocó	5.587500	-76.654167	GBIF [gbif.org]. 2023	Preserved specimen	COLZOOCH-H 0321
Canton Del San Pablo	Chocó	5.354865	-76.672544	iNaturalist community 2023	Human observation	https://www.inaturalist.org/observations/169959349
Condotó, Peña Lisa	Chocó	5.105000	-76.568000	Schmidt 1935	Literature record (M. a. jani paratype)	NHMUK 1946.1.21.31
Condotó, Peña Lisa	Chocó	5.105000	-76.568000	Schmidt 1936	Literature record (M. a. jani paratype)	NHMUK 1946.1.21.34-35
El Litoral del San Juan, Taparalito, quebrada Taparalito, a una hora arriba de comunidad taparralito	Chocó	4.200678	-76.733652	GBIF [gbif.org]. 2023	Preserved specimen	IAvH-R 6769
El Litoral del San Juan, Taparalito, quebrada Taparalito, a una hora arriba de comunidad taparralito	Chocó	4.200678	-76.733652	GBIF [gbif.org]. 2023	Preserved specimen	IAvH-R 6770
El Litoral del San Juan, Vereda Taparolito, bajo San Juan, región de Málaga	Chocó	4.212194	-77.090417	GBIF [gbif.org]. 2023	Preserved specimen	IAvH-R 7360
Istmina	Chocó	5.144450	-76.683550	GBIF [gbif.org]. 2023	Preserved specimen	MHUA-R 14772
Istmina	Chocó	5.160538	-76.683971	GBIF [gbif.org]. 2023	Preserved specimen	MLS 1569
Istmina	Chocó	5.160538	-76.683971	GBIF [gbif.org]. 2023	Preserved specimen	MLS 1570
Istmina	Chocó	5.160538	-76.683971	GBIF [gbif.org]. 2023	Preserved specimen	MLS 1571
Novita, Rio San Juan	Chocó	4.960474	-76.609474	Schmidt 1936	Literature record (*M. a. jani* paratype)	NHW
Novita, Rio San Juan	Chocó	4.960474	-76.609474	Schmidt 1937	Literature record (*M. a. jani* paratype)	NHW
Nuquí	Chocó	5.873771	-77.291912	iNaturalist community 2023	Human observation	https://www.inaturalist.org/observations/38878398

Appendix. (*Continuation*).

Locality	Department	Latitude	Longitude	Reference	Basis of record	Voucher/Link
Quibdó	Chocó	5.591139	-76.668526	iNaturalist community 2023	Human observation	https://www.inaturalist.org/observations/22897523
Quibdó	Chocó	5.683594	-76.628346	iNaturalist community 2023	Human observation	https://www.inaturalist.org/observations/71379788
Quibdó	Chocó	5.694722	-76.661111	GBIF [gbif.org]. 2023	Preserved specimen	MLS 1567
Quibdó, Pacurita (Cabí)	Chocó	5.681590	-76.597840	GBIF [gbif.org]. 2023	Preserved specimen	COLZOOCH-H 1516
Río Quito, San Isidro	Chocó	5.626390	-76.748840	GBIF [gbif.org]. 2023	Preserved specimen	COLZOOCH-H 0634
Unión Panamericana, Salero	Chocó	5.360278	-76.645833	GBIF [gbif.org]. 2023	Preserved specimen	COLZOOCH-H 1418
Unión Panamericana, Salero	Chocó	5.360278	-76.645833	GBIF [gbif.org]. 2023	Preserved specimen	COLZOOCH-H 1427
Unión Panamericana, Salero	Chocó	5.326389	-76.615000	GBIF [gbif.org]. 2023	Preserved specimen	COLZOOCH-H 2786
Unión Panamericana, Salero	Chocó	5.326389	-76.615000	GBIF [gbif.org]. 2023	Preserved specimen	COLZOOCH-H 2785
Unión Panamericana, Salero	Chocó	5.360278	-76.645833	GBIF [gbif.org]. 2023	Preserved specimen	COLZOOCH-H 1475
Unión Panamericana, Salero	Chocó	5.360278	-76.645833	GBIF [gbif.org]. 2023	Preserved specimen	COLZOOCH-H 1212
Unión Panamericana, Salero	Chocó	5.319722	-76.617778	GBIF [gbif.org]. 2023	Preserved specimen	COLZOOCH-H 2230
Tadó	Chocó	5.256917	-76.552556	Schmidt 1936	Literature record (*M. a. jani* paratype)	NHMUK 1946.1.20.28
Tadó	Chocó	5.265977	-76.564874	GBIF [gbif.org]. 2023	Preserved specimen	MLS 1568
Tadó	Chocó	5.265977	-76.564874	GBIF [gbif.org]. 2023	Preserved specimen	MLS 1852
Barbacoas, El Pangan ProAves Reserve	Nariño	1.331259	-78.064873	iNaturalist community 2023	Human observation	https://www.inaturalist.org/observations/135865244
Policarpa	Nariño	1.723544	-77.49437	iNaturalist community 2023	Human observation	https://www.inaturalist.org/observations/186213517
Ricaurte	Nariño	1.226632	-78.085775	iNaturalist community 2023	Human observation	https://www.inaturalist.org/observations/186203188

Appendix. (*Continuation*).

Locality	Department	Latitude	Longitude	Reference	Basis of record	Voucher/Link
Ricaurte, 9 Km SE Ricaurte	Nariño	1.135222	-77.978583	GBIF [gbif.org]. 2023	Preserved specimen	KU 169965
Pueblo Rico, Santa Cecilia, pacific Side, 800 m	Risaralda	5.343056	-76.096111	GBIF [gbif.org]. 2023	Preserved specimen	FMNH 55880
Pueblo Rico, Santa Cecilia, Pacific Side, 800 m	Risaralda	5.343056	-76.096111	GBIF [gbif.org]. 2023	Preserved specimen	FMNH 55879
Pueblo Rico, Santa Cecilia	Risaralda	5.343056	-76.096111	GBIF [gbif.org]. 2023	Preserved specimen	ICN 6965
Pueblo Rico, Santa Cecilia, Vereda Piedras	Risaralda	5.359167	-76.140556	GBIF [gbif.org]. 2023	Preserved specimen	ICN 6905
San Sebastián de Mariquita, Vereda La Maria, km 82 road Mariquita-Falan	Tolima	5.180791	-74.881952	This work	Preserved specimen	IAvH-R 7332
Buenaventura, Anchicayá, central hidroeléctrica	Valle del Cauca	3.533263	-76.867508	GBIF [gbif.org]. 2023	Preserved specimen	UVC 5401
Buenaventura, Bajo Anchicayá, cerca a represa Bajo Anchicayá	Valle del Cauca	3.613741	-76.91095	GBIF [gbif.org]. 2023	Preserved specimen	UVC 13808
Buenaventura, Bajo Calima, cuartel B-V83 concesión Pulpapel, Cartón Colombia, cerca a Pulpapel	Valle del Cauca	3.942106	-76.968401	GBIF [gbif.org]. 2023	Preserved specimen	UVC 11174
Buenaventura, Bajo Calima, estación agroforestal Universidad del Tolima	Valle del Cauca	3.983336	-76.949966	GBIF [gbif.org]. 2023	Preserved specimen	UVC 5402
Buenaventura, Bajo Calima, estaciónagroforestal Universidad del Tolima	Valle del Cauca	3.983336	-76.949966	GBIF [gbif.org]. 2023	Preserved specimen	UVC 7438
Buenaventura, Bajo Calima, estaciónagroforestal Universidad del Tolima	Valle del Cauca	3.983336	-76.949966	GBIF [gbif.org]. 2023	Preserved specimen	UVC 8566
Buenaventura, Bajo Calima, estaciónagroforestal Universidad del Tolima	Valle del Cauca	3.983336	-76.949966	GBIF [gbif.org]. 2023	Preserved specimen	UVC 8567
Buenaventura, Bajo Calima, estación agroforestal Universidad del Tolima	Valle del Cauca	3.983336	-76.949966	GBIF [gbif.org]. 2023	Preserved specimen	UVC 8568

Appendix. (*Continuation*).

Locality	Department	Latitude	Longitude	Reference	Basis of record	Voucher/Link
Buenaventura, camp Cartón Colombia, km 13 car.	Valle del Cauca	3.871111	-76.882500	GBIF [gbif.org]. 2023	Preserved specimen	ICN 309
Buenaventura, Juanchaco	Valle del Cauca	3.936374	-77.360929	iNaturalist community 2023	Human observation	https://www.inaturalist.org/observations/70878977
Buenaventura, Juanchaco, Ladrilleros	Valle del Cauca	3.942153	-77.361115	Ayerbe et al. 2007	Preserved specimen	MHNUC 000067
Buenaventura, Magüipi	Valle del Cauca	3.832586	-77.261857	Ayerbe et al. 2008	Preserved specimen	MHNUC 000474
Buenaventura, Sabaletas	Valle del Cauca	3.746885	-76.96883	GBIF [gbif.org]. 2023	Preserved specimen	UVC 10770
Buenaventura, Sabaletas	Valle del Cauca	3.746885	-76.96883	GBIF [gbif.org]. 2023	Preserved specimen	UVC 10773
Buenaventura, San Cipriano	Valle del Cauca	3.839861	-76.897888	GBIF [gbif.org]. 2023	Preserved specimen	UVC 15484
Buenaventura, Río Calima, camp. Cartón Colombia, a 7 km del río.	Valle del Cauca	3.878889	-76.895833	GBIF [gbif.org]. 2023	Preserved specimen	ICN 402
Buenaventura, Río Calima, camp. Cartón Colombia, a 7 km del río.	Valle del Cauca	3.878889	-76.895833	GBIF [gbif.org]. 2023	Preserved specimen	ICN 413
Buenaventura, Río Calima, camp. Cartón Colombia, a 7 km del río.	Valle del Cauca	3.878889	-76.895833	GBIF [gbif.org]. 2023	Preserved specimen	ICN 424
Calima, Darién, Campo alegre	Valle del Cauca	3.929503	-76.669917	GBIF [gbif.org]. 2023	Human observation	FUNTROPICO_ RFPR_RIOBRAVO_ PARAGUERO 3062
Dagua, Lobo Guerrero, carretera de Buenaventura-Lobo Guerrero	Valle del Cauca	3.772889	-76.692972	GBIF [gbif.org]. 2023	Preserved specimen	IAvH-R 7354

COLZOOCH-H: Colección Científica de Referencia Zoológica del Chocó – Herpetología, Universidad Tecnológica del Chocó, Quibdó, Colombia; FMNH: Field Museum of Natural History, Division of Amphibians and Reptiles, Chicago, USA; IAvH-R: Instituto de Investigación de Recursos Biológicos Alexander von Humboldt, Colección de Reptiles, Villa de Leyva, Colombia; ICN: Instituto de Ciencias Naturales, Museo de Historia Natural de la Universidad Nacional de Colombia, Universidad Nacional de Colombia, Bogotá, Colombia; KU: Kansas University Natural History Museum, Kansas, USA; MCZ: Museum of Comparative Zoology, Harvard University, Cambridge, USA; MHNUC: Museo de Historia Natural, Universidad del Cauca, Popayán, Colombia; MHUA-R: Museo de Herpetología Universidad de Antioquia, Colección de Reptiles, Universidad de Antioquia, Medellín, Colombia; MLS: Museo de Historia Natural de La Salle, Bogotá, Colombia; NHMUK: Natural History Museum, United Kingdom, London, UK; NMW: Naturhistorisches Museum, Wien, Vienna, Austria; UVC: Colección de Anfibios y Reptiles, Universidad del Valle, Santiago de Cali, Colombia. Coordinates, when not explicit, were approximated according to the locality.