

Snake charming and the exploitation of snakes in Morocco

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SUPPLEMENTARY MATERIAL 1 The standardized forms used when interviewing Aissawa snake charmers and snake hunters in Morocco.

For snake charmers:

Record number:

Date:

Site:

Name of interviewee:

Age:

Snakes species and no. of individuals held:

Number of individuals (per species) exploited per year:

Do you feed the snakes?

How do you get the snakes?

How much did you pay for an Egyptian cobra?

Annual period for snake exhibition?

Do you know other snake charmers in the locality or surrounding areas?

Implicit and explicit contradictions:

For snake hunters:

Record number:

Date:

Site:

Name of interviewee:

Age:

Snakes species and no. of individuals held:

Number of individuals (per species) hunted per year:

Hunting places:

Do you know other snake hunters in surrounding areas?

Do you feed the snakes?

How much did you earn for an Egyptian cobra?

Annual period for snake hunting:

Implicit and explicit contradictions:

TABLE S1 Snake hunting localities in south-western Morocco during 1989–2010.

| Locality | Latitude | Longitude | Year |
|-------------------------|----------|-----------|------|
| Sidi Ahmed | 29.64°N | 9.37°W | 1989 |
| Ighil Isemalalene | 30.15°N | 8.83°W | 1989 |
| Guelmin, close to | 29.05°N | 10.04°W | 1989 |
| Oued Chbika | 28.43°N | 11.35°W | 1989 |
| Targoumait, close to | 28.82°N | 9.58°W | 1989 |
| Targoumait | 28.84°N | 9.56°W | 1989 |
| Trine-Al-Mader | 29.75°N | 9.63°W | 1989 |
| Assaka | 29.69°N | 9.51°W | 1989 |
| Aït Baha | 30.07°N | 9.16°W | 1989 |
| Aït Amrane | 29.73°N | 9.29°W | 1989 |
| El Feid, Oued Massa | 29.81°N | 9.56°W | 1989 |
| Taroudant | 30.36°N | 8.87°W | 1989 |
| Ain Ifni | 29.38°N | 10.09°W | 1989 |
| Bouizakarne | 29.18°N | 9.71°W | 1989 |
| Agadir, close to | 30.01°N | 9.40°W | 1989 |
| Labyar | 28.78°N | 10.50°W | 1989 |
| Labyar | 28.79°N | 10.47°W | 1989 |
| Taroudant region | 30.30°N | 8.91°W | 1990 |
| Tioute,Taroudant region | 30.42°N | 8.64°W | 1991 |
| Ait Rass | 30.21°N | 8.81°W | 1991 |
| Oued Dra | 28.56°N | 11.05°W | 1991 |
| Tan Tan, close to | 28.47°N | 11.13°W | 1991 |
| Sidi Ifni, close to | 29.39°N | 10.14°W | 1991 |
| Asaka, north of | 29.08°N | 10.15°W | 1991 |
| Tabaynoute | 29.24°N | 10.17°W | 1991 |

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|-------------------------------|---------|---------|------|
| Oued Seyad, Plage Blanche | 28.88°N | 10.50°W | 1991 |
| Oued Sous | 30.39°N | 9.08°W | 1991 |
| Taroudant, close to | 30.39°N | 8.83°W | 1991 |
| Oued Draa | 28.49°N | 10.86°W | 1991 |
| Aït Yahya | 29.98°N | 9.25°W | 1991 |
| Bouizakarne | 29.17°N | 9.70°W | 1991 |
| Tidergit | 28.58°N | 10.84°W | 1991 |
| Tagmout | 29.03°N | 9.46°W | 1991 |
| Tan Tan, north of | 28.53°N | 11.10°W | 1991 |
| Tafnidilt | 28.54°N | 10.96°W | 1991 |
| Afra | 29.55°N | 9.04°W | 1993 |
| Plage Blanche | 28.83°N | 10.70°W | 1993 |
| Rass Oumlil | 28.92°N | 10.06°W | 1993 |
| Oued Draa, south of | 28.43°N | 10.74°W | 1993 |
| Samara | 28.18°N | 11.44°W | 1993 |
| Tan Tan, north of | 28.54°N | 11.17°W | 1993 |
| Rass Oumlil | 28.92°N | 10.10°W | 1993 |
| Tan Tan | 28.48°N | 11.06°W | 1993 |
| Aouinet Lahna | 28.51°N | 9.86°W | 1993 |
| Tata | 29.77°N | 7.98°W | 1993 |
| Oued Draa | 28.46°N | 10.80°W | 1993 |
| Jbel Bou Arhzene | 30.74°N | 7.26°W | 1993 |
| Jbel Saghro | 30.94°N | 6.23°W | 1993 |
| Tiouit | 31.17°N | 5.79°W | 1993 |
| Timoula | 31.82°N | 5.48°W | 1993 |
| Oued Fint, South of Uarzazate | 30.82°N | 6.95°W | 1993 |
| Oued Fint, South of Uarzazate | 30.83°N | 6.89°W | 1994 |

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|-----------------------|---------|---------|------|
| Jbel Saghro | 30.94°N | 6.22°W | 1994 |
| Agdz | 30.72°N | 6.44°W | 1994 |
| Jebel Sahro | 31.00°N | 5.89°W | 1994 |
| Tifernine | 31.12°N | 5.73°W | 1994 |
| Jbel Saghro | 30.94°N | 6.44°W | 1994 |
| Anezal | 30.70°N | 7.27°W | 1994 |
| Jbel Saghro | 30.94°N | 6.28°W | 1994 |
| Toundoute | 31.27°N | 6.58°W | 1994 |
| Bouizakarne | 29.16°N | 9.74°W | 1994 |
| Labyar | 28.83°N | 10.43°W | 1994 |
| Tan Tan, south of | 28.37°N | 11.24°W | 1994 |
| Tan Tan | 28.42°N | 11.15°W | 1994 |
| Aïssa Abd el Kader | 31.92°N | 9.06°W | 1995 |
| Guelmin, south of | 28.94°N | 10.03°W | 1995 |
| Labyar | 28.84°N | 10.40°W | 1995 |
| Guelmin | 29.01°N | 10.07°W | 1995 |
| Tinerhir | 31.51°N | 5.03°W | 1995 |
| Boumalne Dades | 31.24°N | 6.12°W | 1995 |
| Iknuiine, Jbel Sahgro | 31.13°N | 5.79°W | 1995 |
| Uarzazate | 30.94°N | 6.92°W | 1995 |
| Boumalne Dades | 31.38°N | 5.99°W | 1995 |
| Skoura | 31.07°N | 6.57°W | 1995 |
| Oued Dades | 30.98°N | 6.63°W | 1995 |
| Skoura, south of | 31.01°N | 6.54°W | 1995 |
| Jbel Saghro, north of | 31.07°N | 6.10°W | 1995 |
| Jbel Saghro, south of | 30.78°N | 6.09°W | 1995 |
| Insei | 30.81°N | 6.58°W | 1995 |

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|--------------------------|---------|---------|------|
| Uerzazate, south of | 30.89°N | 6.72°W | 1995 |
| Tinerhir, south-east of | 31.46°N | 5.43°W | 1995 |
| Amerzgane | 31.04°N | 7.21°W | 1995 |
| Aguelmouss | 32.11°N | 4.16°W | 1995 |
| Taroudant, Ued Sous | 30.50°N | 8.88°W | 1995 |
| Taroudant, north of | 30.54°N | 8.88°W | 1995 |
| Guelmim | 28.97°N | 10.14°W | 1995 |
| Labyar | 28.84°N | 10.41°W | 1995 |
| Rass Oumlil | 28.92°N | 10.08°W | 1995 |
| Tidergit | 28.56°N | 10.81°W | 1995 |
| Labyar | 28.87°N | 10.56°W | 1995 |
| Tan Tan | 28.37°N | 11.18°W | 1995 |
| Oued Chebeika | 28.11°N | 11.42° | 1995 |
| Akka | 29.36°N | 8.26°W | 1995 |
| Tata | 29.75°N | 7.96°W | 1995 |
| Tan Tan, south of | 28.39°N | 11.16°W | 1995 |
| Uarzazate, south of | 30.74°N | 6.90°W | 1995 |
| El Borj | 30.67°N | 7.08°W | 1996 |
| Ait Saoun | 30.73°N | 6.63°W | 1996 |
| Labyar | 28.81°N | 10.47°W | 1996 |
| Amizmiz | 31.22°N | 8.24°W | 1996 |
| Chichaoua, west of | 31.58°N | 9.02°W | 1996 |
| Ben Guerir | 32.08°N | 7.93°W | 1996 |
| Labyar | 28.83°N | 10.40°W | 1996 |
| Tan Tan | 28.46°N | 11.10°W | 1996 |
| Sidi Ifni, south-east of | 29.29°N | 10.15°W | 1996 |
| Sidi Ifni, east of | 29.40°N | 10.07°W | 1996 |

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|---------------------|---------|---------|------|
| Oued Seyad | 28.99°N | 10.46°W | 1996 |
| Fask | 29.02°N | 9.82°W | 1996 |
| Tighmert | 29.02°N | 9.82°W | 1996 |
| Aureora | 28.72°N | 10.88°W | 1996 |
| Tidergit, north of | 28.62°N | 10.83°W | 1996 |
| Labyar | 28.86°N | 10.43°W | 1996 |
| Beni Melal | 32.37°N | 6.31°W | 1996 |
| Oulad Teima | 30.48°N | 9.38°W | 1996 |
| Oulad Teima | 30.48°N | 9.38°W | 1996 |
| Sidi Ifni, east of | 29.36°N | 10.12°W | 1996 |
| Sidi Ifni, east of | 29.39°N | 10.07°W | 1996 |
| Bouizakarne | 29.18°N | 9.64°W | 1996 |
| Guelmim, south of | 28.91°N | 10.17°W | 1996 |
| Plage Blanche | 28.80°N | 10.80°W | 1996 |
| Sidi Sabi | 28.59°N | 10.65°W | 1996 |
| Bou Jerif | 29.11°N | 10.38°W | 1996 |
| Plage Blanche | 28.83°N | 10.64°W | 1996 |
| Ras Tarf | 28.93°N | 10.45°W | 1996 |
| Oued Seyad | 28.91°N | 10.55°W | 1996 |
| Tinzaline, north of | 30.75°N | 7.36°W | 1996 |
| Toulouine | 31.44°N | 5.47°W | 1996 |
| Jbel Saghro | 31.16°N | 6.13°W | 1996 |
| Cafia | 31.01°N | 6.58°W | 1996 |
| Sidi Flah, south of | 30.96°N | 6.53°W | 1996 |
| Skoura | 31.08°N | 6.57°W | 1996 |
| Aït Saoun | 30.74°N | 6.64°W | 1996 |
| Zagora, south of | 29.80°N | 5.66°W | 1996 |

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|--------------------------------------|---------|---------|------|
| Uarzazate | 30.91°N | 6.89°W | 2003 |
| Zagora | 30.35°N | 5.82°W | 2003 |
| Tan Tan | 28.43°N | 11.09°W | 2003 |
| Agadir | 30.40°N | 9.51°W | 2003 |
| El-Aaiún | 27.39°N | 12.87°W | 2003 |
| Tifornine | 31.16°N | 5.71°W | 2003 |
| Uarzazate | 30.91°N | 6.89°W | 2003 |
| Zagora | 30.35°N | 5.82°W | 2003 |
| Tan Tan | 30.35°N | 5.87°W | 2003 |
| Guelmim | 29.05°N | 10.03°W | 2003 |
| Guelmim | 29.05°N | 10.03°W | 2003 |
| Sebt Ahminich, south-east of Guelmin | 28.82°N | 9.93°W | 2003 |
| Akhfennir | 28.09°N | 12.05°W | 2003 |
| Uarzazate | 30.91°N | 6.89°W | 2003 |
| Zagora | 30.35°N | 5.82°W | 2003 |
| Tata | 29.73°N | 7.95°W | 2003 |
| Merzouga | 31.02°N | 3.90°W | 2003 |
| Sidi Bou Othmane | 31.21°N | 8.27°W | 2003 |
| Marrakech | 31.58°N | 8.01°W | 2003 |
| Guelmim | 29.05°N | 10.03°W | 2003 |
| Uarzazate | 30.91°N | 6.89°W | 2003 |
| Tan Tan | 28.43°N | 11.09°W | 2003 |
| Oued Chebeika | 28.17°N | 11.46°W | 2003 |
| Akhfennir | 28.07°N | 12.03°W | 2003 |
| Assaka | 28.95°N | 10.22°W | 2003 |
| Aureora | 28.69°N | 10.95°W | 2003 |
| Labyar | 28.82°N | 10.46°W | 2003 |

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|--------------------------|---------|---------|------|
| Labyar | 28.74°N | 10.45°W | 2003 |
| Akhfennir, north of | 28.01°N | 11.82°W | 2003 |
| Tinzouline | 30.49°N | 6.08°W | 2003 |
| Zagora | 30.29°N | 5.82°W | 2003 |
| Jbel Saghro | 30.97°N | 5.75°W | 2003 |
| Boumalne Dades | 31.38°N | 5.99°W | 2003 |
| Tiouit, Jbel Saghro | 31.09°N | 5.48°W | 2003 |
| Imzil | 30.53°N | 7.01°W | 2003 |
| Ait Saoun | 30.73°N | 6.57°W | 2003 |
| Oumidernil | 30.85°N | 6.63°W | 2003 |
| Issougrid | 30.82°N | 6.80°W | 2003 |
| Fint | 30.75°N | 7.00°W | 2007 |
| El Hammam | 30.89°N | 7.30°W | 2007 |
| Taghdoute, north-east of | 30.66°N | 7.23°W | 2007 |
| Halouqte | 30.71°N | 7.31°W | 2007 |
| Timegharegħrine | 30.35°N | 7.30°W | 2007 |
| Ait rahou | 30.44°N | 7.81°W | 2007 |
| Fint | 30.75°N | 7.00°W | 2007 |
| El Hammam | 30.89°N | 7.30°W | 2007 |
| Tisslit, north-west of | 30.66°N | 7.23°W | 2007 |
| Halouqte | 30.71°N | 7.31°W | 2007 |
| Angraf | 30.33°N | 7.30°W | 2007 |
| Oued Fint | 30.79°N | 6.96°W | 2007 |
| Tisslit | 30.66°N | 7.23°W | 2007 |
| Guelmim | 31.64°N | 4.93°W | 2007 |
| Uarzazate | 30.88°N | 6.87°W | 2007 |
| Jbel Saghro | 30.91°N | 6.16°W | 2007 |

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|------------------------|---------|---------|------|
| Tifornine | 31.11°N | 5.69°W | 2007 |
| Labyar | 28.80°N | 10.54°W | 2007 |
| Assaka | 29.06°N | 10.31°W | 2007 |
| Guelmim, south-east of | 28.88°N | 10.29°W | 2007 |
| Targoumait | 28.83°N | 9.56°W | 2007 |
| Join Zkara | 28.92°N | 10.46°W | 2007 |
| Fask | 28.97°N | 9.83°W | 2007 |
| Ait Rba | 29.78°N | 9.66°W | 2007 |
| Ait Ighil | 29.75°N | 9.66°W | 2007 |
| Oued Massa | 29.76°N | 9.48°W | 2007 |
| Aglou | 29.60°N | 9.97°W | 2007 |
| Agouni | 29.48°N | 10.05°W | 2007 |
| Tan Tan | 28.42°N | 11.24°W | 2007 |
| Oued Draa | 28.45°N | 10.84°W | 2007 |
| Tah | 27.76°N | 12.94°W | 2007 |
| Akhfennir | 27.98°N | 12.20°W | 2007 |
| Oued Chbika | 28.09°N | 11.43°W | 2007 |
| Oued Ouâar | 28.41°N | 11.32°W | 2007 |
| Ras el Kraia | 27.80°N | 12.66°W | 2007 |
| Agouidirat | 27.85°N | 12.24°W | 2007 |
| Khnifiss | 27.88°N | 12.36°W | 2007 |
| Akhfennir | 28.03°N | 12.04°W | 2007 |
| Akka, south of | 29.37°N | 8.25°W | 2007 |
| Akka, south of | 29.37°N | 8.28°W | 2007 |
| Akka | 29.37°N | 8.26°W | 2007 |
| Akka, north of | 29.42°N | 8.27°W | 2007 |
| Oued Noun | 29.09°N | 10.34°W | 2007 |

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|------------------------|---------|---------|------|
| Bouissafen | 28.76°N | 10.73°W | 2007 |
| Plage Blanche | 28.79°N | 10.88°W | 2007 |
| Bou Tgherdaine | 28.70°N | 10.62°W | 2007 |
| Aït Boukha | 28.95°N | 9.94°W | 2007 |
| Laayoune | 27.74°N | 12.47°W | 2007 |
| Zag | 28.02°N | 9.30°W | 2007 |
| Foum Zguid | 30.08°N | 6.88°W | 2007 |
| Tata | 29.74°N | 7.98°W | 2007 |
| Er Rachidia | 31.90°N | 4.47°W | 2007 |
| Guelmim | 28.91°N | 10.14°W | 2007 |
| Tan Tan | 28.42°N | 11.15°W | 2007 |
| Uarzazate | 30.88°N | 6.87°W | 2007 |
| Tiznit | 29.67°N | 9.74°W | 2007 |
| Rhamna | 31.52°N | 7.75°W | 2007 |
| Er Rachidia | 31.90°N | 4.47°W | 2007 |
| Guelmim | 28.91°N | 10.14°W | 2007 |
| Ouarzazate | 30.88°N | 6.87°W | 2007 |
| Tan Tan | 28.42°N | 11.15°W | 2007 |
| Tan Tan Plage | 28.45°N | 11.31°W | 2009 |
| Oued Draa | 28.62°N | 11.13°W | 2009 |
| Akhfenir | 27.95°N | 11.98°W | 2009 |
| Fouilet Zini, Low Draa | 27.98°N | 11.33°W | 2010 |
| Aglou, north of | 29.82°N | 9.81°W | 2010 |
| Guelmim-Assa road | 28.78°N | 9.42°W | 2010 |
| Guelmim-Assa road | 28.76°N | 9.59°W | 2010 |