

# Development of the Chinese giant salamander *Andrias davidianus* farming industry in Shaanxi Province, China: conservation threats and opportunities

ANDREW A. CUNNINGHAM, SAMUEL T. TURVEY, FENG ZHOU, HELEN M. R. MEREDITH  
WEI GUAN, XINGLIAN LIU, CHANGMING SUN, ZHONGQIAN WANG and MINYAO WU

SUPPLEMENTARY MATERIAL 1 Questionnaire administered at Chinese giant salamander *Andrias davidianus* farms in Shaanxi Province, China, during May 2010–October 2011.

Date:

Company name:

Company address:

When did you start farming Chinese giant salamanders?

What is the total number of Chinese giant salamanders owned by your company?

What is the number of breeding adults?

How many offspring were produced last year?

Has your farm ever succumbed to disease outbreaks?

If so, when have disease outbreaks occurred (date/time of year); what were the clinical signs (symptoms) of disease; and what was the impact of these outbreaks (e.g. number/proportion of animals affected)?

SUPPLEMENTARY MATERIAL 2 Questions used to prompt discussion within focus groups.

Are there, or have there ever been, wild Chinese giant salamanders in your area?

Do the local people eat Chinese giant salamander?

If NO, why not?

If YES, why and how frequently?

Do you know if anyone catches Chinese giant salamanders from the wild in your area?

If YES, why do people catch Chinese giant salamanders from the wild?

Is it easy or difficult to catch Chinese giant salamanders from the wild?

What methods are used or have been used in the past?

Has the Chinese giant salamander declined in your area?

If YES, why has it declined?

Do you farm Chinese giant salamanders or do you know anybody who farms Chinese giant salamanders?

If YES, please provide details of farms (address, owner, contact telephone number, size of farm, age of farm).

Why are Chinese giant salamanders farmed?

How much is a wild Chinese giant salamander worth (CNY)?

How much is a farmed Chinese giant salamander worth (CNY)?

Does the local government ever release Chinese giant salamanders into the wild?

If YES, when, where, how often, how many are released, and from where are they obtained?

What are the main production problems when farming Chinese giant salamanders?

If disease is mentioned, please provide as many details as possible about the extent, causes and impacts of disease.

Discuss any other problems with Chinese giant salamander farming.

SUPPLEMENTARY MATERIAL 3 Comparison of the ranavirus major capsid protein gene fragment sequence (466 nucleotides) obtained from diseased Chinese giant salamander tissues (Query) (GenBank ref. KM609215) with that of Chinese giant salamander ranavirus (CGS) (GenBank ref. KF512820) and *Rana grylio* ranavirus (Rg) (GenBank ref. AY294406), showing 100% homology amongst all three sequences. In the bottom row, \* indicates positions with a conserved residue.

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Query 1 CCTGGCTCCGTTCTGGCCTGTGGCCGGGGCGGGGTTGATGAGATCGCTGGTGTTCCTAT 60
CGS 20487 CCTGGCTCCGTTCTGGCCTGTGGCCGGGGCGGGGTTGATGAGATCGCTGGTGTTCCTAT 20546
Rg 477 CCTGGCTCCGTTCTGGCCTGTGGCCGGGGCGGGGTTGATGAGATCGCTGGTGTTCCTAT 418
*****

Query 61 CATGTTATAGTAGCCTATGCGCTTGGCCTCTGGCATGGTGTACTCGCTCCAGGCGTCCAG 120
CGS 20547 CATGTTATAGTAGCCTATGCGCTTGGCCTCTGGCATGGTGTACTCGCTCCAGGCGTCCAG 20606
Rg 417 CATGTTATAGTAGCCTATGCGCTTGGCCTCTGGCATGGTGTACTCGCTCCAGGCGTCCAG 358
*****

Query 121 GTATGCCGTGTTAAAGGACTGGGCGCTGATGTCGTTGAATGAGAGGTTGACGTTCTCCAC 180
CGS 20607 CATGTTATAGTAGCCTATGCGCTTGGCCTCTGGCATGGTGTACTCGCTCCAGGCGTCCAG 20666
Rg 357 CATGTTATAGTAGCCTATGCGCTTGGCCTCTGGCATGGTGTACTCGCTCCAGGCGTCCAG 298
*****

Query 181 AATGTTGTGCATGGGGTTCCTTTGTCCACCTGATGGTGCCGTTGTCTCCCAGCTGGTTTC 240
CGS 20667 AATGTTGTGCATGGGGTTCCTTTGTCCACCTGATGGTGCCGTTGTCTCCCAGCTGGTTTC 20726
Rg 297 AATGTTGTGCATGGGGTTCCTTTGTCCACCTGATGGTGCCGTTGTCTCCCAGCTGGTTTC 238
*****

Query 241 GGCCAGGAGCTTGACCTCGGGGTCTTGAGCACCAACCAGGCGTTGAGGATGTAATCCCC 300
CGS 20727 GGCCAGGAGCTTGACCTCGGGGTCTTGAGCACCAACCAGGCGTTGAGGATGTAATCCCC 20786
Rg 237 GGCCAGGAGCTTGACCTCGGGGTCTTGAGCACCAACCAGGCGTTGAGGATGTAATCCCC 178
*****

Query 301 CGACCTGGGAACGCCGACCGAAAAGTCTGCCGAAAGCCGGGTTACCCGACATCTTGGC 360
CGS 20787 CGACCTGGGAACGCCGACCGAAAAGTCTGCCGAAAGCCGGGTTACCCGACATCTTGGC 20846
Rg 177 CGACCTGGGAACGCCGACCGAAAAGTCTGCCGAAAGCCGGGTTACCCGACATCTTGGC 118
*****

Query 361 AGCCAGAGACGGCAGCTTGGTGAACCACCCACGGGGTAGTGCTCCTTGACAAAGTACGT 420
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CGS 20847 AGCCAGAGACGGCAGCTTGGTGAACCACCCACGGGGTAGTGCTCCTTGACAAAGTACGT 20906  
Rg 117 AGCCAGAGACGGCAGCTTGGTGAACCACCCACGGGGTAGTGCTCCTTGACAAAGTACGT 58  
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Query 421 GGTGGCATCCGAACCCCGTACATTGCTCTCTCAAGATTGTCATAA 466  
CGS 20907 GGTGGCATCCGAACCCCGTACATTGCTCTCTCAAGATTGTCATAA 20952  
Rg 57 GGTGGCATCCGAACCCCGTACATTGCTCTCTCAAGATTGTCATAA 12  
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