**Supplementary Material**

Abundance and distribution of wintering Scaly-sided Mergansers *Mergus squamatus* in China: where are the missing birds?

MARK BARTER, XULIANG ZHUANG, XIN WANG, LEI CAO, JINYU LEI, DIANA SOLOVYEVA and ANTHONY D. FOX

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d

b

c

a



f

e

Figure S2. Photographic images of two typical reservoirs – (a) Shibikeng (Jiangxi Province) and (b) Fengshaba (Gunagdong).



b

a

Table S1. List of locations, with dates and numbers of Scaly-sided Mergansers recorded during winter period between January 2000 and February 2011, per province in alphabetical order, with references for all records.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Site** | **Sighting month** | **No.** | **Long.** | **Lat.** | **Source** |
| **Anhui Province** |  |  |  |  |  |
| Nanling Town | Jan-11 | 1 | 118.3 | 30.9 | http://365jia.cn/news/2010-11-18/AF3A32DF5294285F.html |
| **Beijing Municipality** |  |  |  |  |  |
| Badachu | Nov-05 | 1 | 116.2 | 40 | Jushu at www.birdtalker.net |
| Bulaotun Reservoir | Nov-10 | 1 | 117 | 40.5 | Hongzuilanque at www.birdtalker.net |
| **Chongqing Municipality** |  |  |  |  |
| Shizhu | Nov-08 | 1 | 108.1 | 30 | China Birdwatch 70:30 (Dec 2009) |
| **Fujian Province** |  |  |  |  |  |
| Guangze | Feb-07 | 6 | 117.2 | 27.5 | China Ornithological Society 2008. |
| Wenwusha Reservoir | Nov-09 | 1 | 119.6 | 25.9 | China Birdwatch 70 (Dec 2009) |
| Songkou County | Jan-11 | 9 | 118.6 | 25.8 | Jindandan2004 at www.birdtalker.net |
| **Guangdong Province** |  |  |  |  |  |
| Baipenzhu Reservoir | Dec-07 | 25 | 114.7 | 22.9 | Tingcao at www.birdtalker.net |
|  | Dec-07 | 31 |  |  | http://www.hzcom.cn/keji/Article.asp?ID=52975 |
|  | Jan-08 | 7 |  |  | Tianyayouxia at www.birdtalker.net |
|  | Dec-08 | 15 |  |  | Xiaozhu at www.birdtalker.net |
| Shimen National FP | Jan-06 | 1 | 113.8 | 23.8 | Waterbirds 25(4): 462-464. |
|  | Jan/Feb-06 | 1 |  |  | birdman at www.birdtalker.net |
|  | Jan-08 | 3 |  |  | Feiyu at www.birdtalker.net |
| **Guangxi Province** |  |  |  |  |  |
| Guanglin | Nov-09 | 1 | 108.5 | 23.4 | China Birdwatch 70:30 (Dec 2009) |
| **Henan Province** |  |  |  |  |  |
| Song County | Jan-09 | 8 | 112.1 | 34.2 | China Birdwatch 67:28 (June 2009) |
|  | Mar-09 | 9 |  |  | Yiwei at www.birdtalker.net |
|  | Nov-09 | 1 |  |  | Yiwei at www.birdtalker.net |
|  | Dec-09 | 8 |  |  | Huanghejindiao at www.birdtalker.net |
|  | Feb-10 | 1 |  |  | tornado at www.birdtalker.net |
|  | Jan-11 | 7 |  |  | Shuiqiongchu at www.birdtalker.net |
|  | Jan-11 | 8 |  |  | Henhu at www.birdtalker.net |
|  | Feb-11 | 2 |  |  | Piaoboxintianweng at www.birdtalker.net |
|  | Feb-11 | 6 |  |  | Hongzuixiangsi at www.birdtalker.net |
| **Hubei Province** |  |  |  |  |  |
| Jingshan Town | Jan-10 | 4 | 113.2 | 31.3 | http://news.cjn.cn/hbxw/201103/t1302894.htm |
|  | Jan-11 | 4 |  |  | CjiaD at www.birdtalker.net |
| **Hunan Province** |  |  |  |  |  |
| East/South Dongting Hu | 1999-2000 | 30 | 113 | 29 | Waterbirds 25(4): 462-464. |
| Huangshi Reservoir | Mar-08 | 1 | 111.4 | 29.1 | http://hn.rednet.cn/c/2008/03/19/1464473.htm |
|  | Mar-08 | 8 |  |  | Chinese J. of Zoology Aug 2008. |
| Lingjintan Reservoir | Mar-08 | 6 | 111.4 | 28.9 | Chinese J. of Zoology Aug 2008. |
| Yuan River | Feb-11 | 4 | 111.5 | 28.9 | http://www.taoyuan.gov.cn/html/2011/2/19/19650.html |
| **Jiangsu Province** |  |  |  |  |  |
| Chishan Hu, Jurong | Dec-07 | 1 | 119.1 | 31.9 | China Ornithological Society 2007. |

Table S1 (continued). List of locations, with dates and numbers of Scaly-sided Mergansers recorded during winter period between January 2000 and February 2011, per province in alphabetical order, with references for all records.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Site** | **Sighting month** | **No.** | **Long.** | **Lat.** | **Source** |
| **Jiangxi Province** |  |  |  |  |  |
| An Le He, S of Wuyuan | Dec-02 | 9 | 117.7 | 29.1 | Lin and He (2003). |
|  | Feb-04 | 6 |  |  | Barter, M. et al. Waterbird Survey of the Middle and Lower Yangtze River Floodplain in Late January and Early February 2004. |
|  | Dec-04 | 60 |  |  | Chinese Journal of Zoology 41(5):52-56 (in Chinese). |
|  | Feb-05 | 8 |  |  | Jikou at www.birdtalker.net |
|  | Feb-05 | 33 |  |  | Barter M. et al. Waterbird Survey of the Middle and Lower Yangtze River Floodplain (February 2005). |
|  | Nov-05 | 8 |  |  | Yeniao at www.birdtalker.net |
|  | Jan-06 | 4 |  |  | Shizaishui at www.birdtalker.net |
|  | Feb-06 | 6 |  |  | Cao, L. et al. Scaly-sided Merganser survey in south Anhui and north-east Jiangxi Provinces, 2006. |
|  | Feb-06 | 25 |  |  | Cao, L. et al. Scaly-sided Merganser survey in south Anhui and north-east Jiangxi Provinces, 2006. |
|  | Dec-06 | 31 |  |  | J Northeast Normal University (natural Science Edition) 40(1):111-115. |
|  | Feb-07 | 6 |  |  | Zhongguotouhaodiaomin at www.birdtalker.net |
|  | Apr-07 | 1 |  |  | Henhu at www.birdtalker.net |
|  | Dec-07 | 18 |  |  | China Ornithological Society 2008. |
|  | Feb-09 | 18 |  |  | http://www.hlslfh.gov.cn |
|  | Dec-09 | 3 |  |  | Wanding at www.birdtalker.net |
|  | Feb-10 | 2 |  |  | Xiaocao at www.birdtalker.net |
|  | Feb-10 | 2 |  |  | Youtuaiai at www.birdtalker.net |
|  | Feb-10 | 5 |  |  | Piaoboxintianweng at www.birdtalker.net |
|  | Nov-10 | 8 |  |  | Mcaribou at www.birdtalker.net |
|  | Nov-10 | 21 |  |  | Piaoboxintianweng at www.birdtalker.net |
|  | Nov-10 | 22 |  |  | sheen at www.birdtalker.net |
|  | Dec-10 | 1 |  |  | leaside at www.birdtalker.net |
|  | Feb-11 | 4 |  |  | tiantian at www.birdtalker.net |
|  | Feb-11 | 9 |  |  | Shanque at www.birdtalker.net |
|  | Feb-11 | 13 |  |  | Mcaribou at www.birdtalker.net |
|  | Mar-11 | 2 |  |  | Mcaribou at www.birdtalker.net |
| Beiliao He, Jing An | Dec-07 | 8 | 115.2 | 28.9 | Chinese J of Zoology 43(2):13. |
| Chang Jiang, Fuliang | Dec-06 | 22 | 117.2 | 29.4 | J Northeast Normal University (natural Science Edition) 40(1):111-115. |
|  | Feb-09 | 33 |  |  | http://www.hlslfh.gov.cn |
|  | Feb-09 | 15 |  |  | Sichuan Journal of Zoology 29(4): 597-600. |
|  | Feb-09 | 13 |  |  | Sichuan Journal of Zoology 29(4): 597-600. |
|  | Dec-09 | 4 |  |  | http://www.jxrczpw.com/Html/Info/10332.html |
|  | Nov-10 | 7 |  |  | http://www.jdzol.com/2010/1130/391.html |
| Dexing | 2005 | 58 | 117.8 | 29.1 | China Crane News 12(1):34-36. |
|  | Jan-07 | 1 |  |  | http://www.moobol.com/ms/85/live8597.shtml |
| Guixi, Xin Jiang | 2007 | 88 | 117.2 | 28.3 | China Crane News 12(1):34-36. |
|  | Dec-09 | 10 |  |  | Mcaribou at www.birdtalker.net |
|  | Feb-09 | 2 |  |  | Sichuan Journal of Zoology 29(4): 597-600. |
|  | Feb-09 | 2 |  |  | Sichuan Journal of Zoology 29(4): 597-600. |
|  | Feb-09 | 2 |  |  | Sichuan Journal of Zoology 29(4): 597-600. |
|  | Feb-09 | 16 |  |  | http://www.hlslfh.gov.cn |
|  | Mar-06 | 15 |  |  | Chinese Journal of Zoology 41(5):52-56 (in Chinese). |

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|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Site** | **Sighting month** | **No.** | **Long.** | **Lat.** | **Source** |
| **Jiangxi Province (continued)** |  |  |  |  |
| Jing An County | 2007 | 11 | 115.2 | 28.9 | China Crane News 12(1):34-36. |
|  | Feb-09 | 31 |  |  | Sichuan Journal of Zoology 29(4): 597-600. |
| Litan He | Jan-08 | 2 | 116.7 | 27.5 | Cao, L. et al. Scaly-sided Merganser survey in south Anhui and north-east Jiangxi Provinces, 2008. |
| Longhushan | Feb-09 | 14 | 117.02 | 28.1 | Sichuan Journal of Zoology 29(4): 597-600. |
|  | Feb-09 | 16 |  |  | Sichuan Journal of Zoology 29(4): 597-600. |
|  | Feb-09 | 17 |  |  | Sichuan Journal of Zoology 29(4): 597-600. |
| Luxi He | Oct-07 | 100 | 117 | 28.2 | http://www.cnr.cn/jx/gdxw/200807/t20080701\_505003706.html |
|  | Nov-08 | 12 |  |  | http://www.jiangxi.gov.cn/dtxx/sxdt/200811/t20081107\_97072.htm |
|  | Dec-08 | 29 |  |  | Xiao et al. |
|  | Oct-09 | 2 |  |  | http://www.longhushan.com/html/artic/new/2009/1111/257.html |
|  | Nov-10 | 50 |  |  | http://jiangxi.jxnews.com.cn/system/2010/11/24/011525645.shtml |
| Ta He | Nov-07 | 100 | 117 | 28.3 | http://blog.soogou.net/html/00/n-8200.html |
|  | Jan-08 | 53 |  |  | http://place.jxwmw.cn/system/2008/01/04/010023787.shtml |
|  | Feb-08 | 14 |  |  | Cao, L. et al. Scaly-sided Merganser survey in south Anhui and north-east Jiangxi Provinces, 2008. |
| Wuning | Feb-09 | 2 | 114.69 | 29.3 | Sichuan Journal of Zoology 29(4): 597-600. |
|  | Feb-09 | 3 |  |  | Sichuan Journal of Zoology 29(4): 597-600. |
|  | Feb-09 | 3 |  |  | Sichuan Journal of Zoology 29(4): 597-600. |
|  | Feb-09 | 4 |  |  | Sichuan Journal of Zoology 29(4): 597-600. |
|  | Feb-09 | 32 |  |  | Sichuan Journal of Zoology 29(4): 597-600. |
|  | Feb-09 | 32 |  |  | http://www.17u.com/news/shownews\_109626\_0\_n.html |
|  | Feb-09 | 44 |  |  | Chinese J. of Zoology Dec 2009 |
|  | Feb-09 | 7 |  |  | Sichuan Journal of Zoology 29(4): 597-600. |
|  | Feb-09 | 11 |  |  | Sichuan Journal of Zoology 29(4): 597-600. |
| Xiushui County | Dec-06 | 23 | 114.5 | 29 | J Northeast Normal University (natural Science Edition) 40(1):111-115. |
|  | Feb-09 | 8 |  |  | http://www.hlslfh.gov.cn |
|  | Jan-10 | 10 |  |  | http://www.dzwww.com/rollnews/sh/201001/t20100120\_5492869.htm |
| Yihuang | Feb-09 | 4 | 116.26 | 27.6 | Sichuan Journal of Zoology 29(4): 597-600. |
|  | Feb-09 | 17 |  |  | Sichuan Journal of Zoology 29(4): 597-600. |
|  | Feb-09 | 18 |  |  | Sichuan Journal of Zoology 29(4): 597-600. |
|  | Feb-09 | 22 |  |  | http://www.jx.xinhuanet.com/news/2009-02/19/content\_15735568.htm |
|  | Feb-09 | 39 |  |  | Chinese J. of Zoology Dec 2009 |
| Yintan | Feb-09 | 53 | 117 | 28.2 | http://www.hlslfh.gov.cn |
| Yiyang, Xin Jiang | Nov-00 | 18 | 117.3 | 28.4 | China Crane News 12(1):34-36. |
|  | Dec-01 | 13 |  |  | China Crane News 12(1):34-36. |
|  | Dec-02 | 18 |  |  | China Crane News 12(1):34-36. |
|  | Nov-03 | 31 |  |  | China Ornithological Society 2004. |
|  | Jan-04 | 58 |  |  | Waterbirds 25(4): 462-464. |
|  | Feb-04 | 25 |  |  | Barter, M. et al. Waterbird Survey of the Middle and Lower Yangtze River Floodplain in Late January and Early February 2004. |
|  | Dec-04 | 39 |  |  | Chinese Journal of Zoology 41(5):52-56 (in Chinese). |
|  | Feb-05 | 5 |  |  | Jikou at www.birdtalker.net |
|  | Feb-05 | 11 |  |  | Barter M. et al. Waterbird Survey of the Middle and Lower Yangtze River Floodplain (February 2005). |
|  | Dec-05 | 34 |  |  | Chinese Journal of Zoology 41(5):52-56 (in Chinese). |
|  | Dec-06 | 6 |  |  | J Northeast Normal University (natural Science Edition) 40(1):111-115. |

Table S1 (continued). List of locations, with dates and numbers of Scaly-sided Mergansers recorded during winter period between January 2000 and February 2011, per province in alphabetical order, with references for all records.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Site** | **Sighting month** | **No.** | **Long.** | **Lat.** | **Source** |
| **Jiangxi Province (continued)** |  |  |  |  |
| Yiyang, Xin Jiang | Feb-08 | 22 | 117.3 | 28.4 | Cao, L. et al. Scaly-sided Merganser survey in south Anhui and north-east Jiangxi Provinces, 2008. |
|  | Nov-08 | 10 |  |  | http://news.sr0793.com/ShangRao/200811/20081128082548\_20117.shtml |
|  | Feb-09 | 2 |  |  | Sichuan Journal of Zoology 29(4): 597-600. |
|  | Feb-09 | 6 |  |  | Sichuan Journal of Zoology 29(4): 597-600. |
|  | Feb-09 | 6 |  |  | Sichuan Journal of Zoology 29(4): 597-600. |
|  | Feb-09 | 6 |  |  | Sichuan Journal of Zoology 29(4): 597-600. |
|  | Feb-09 | 7 |  |  | Sichuan Journal of Zoology 29(4): 597-600. |
|  | Feb-09 | 3 |  |  | Sichuan Journal of Zoology 29(4): 597-600. |
|  | Feb-09 | 12 |  |  | Sichuan Journal of Zoology 29(4): 597-600. |
|  | Feb-09 | 42 |  |  | http://www.hlslfh.gov.cn |
|  | Oct-09 | 4 |  |  | <http://www.mwr.gov.cn/slfjq/zxdt_6728/200910/t20091030_87211.html> |
| **Jilin Province** |  |  |  |  |  |
| Hun River | Feb-11 | 10 | 126.4 | 41.9 | http://www.jlsina.com/news/baishan/2011-2-25/13731.shtml |
| **Liaoning Province** |  |  |  |  |  |
| Shuangjianghe NR | Nov-06 | 4 | 124.7 | 40.8 | China Ornithological Society 2006. |
|  | Nov-06 | 4 |  |  | Hongsun2 at www.birdtalker.net |
| Taipingwan, Dandong | Dec-07 | 1 | 124.7 | 40.4 | Hongsun2 at www.birdtalker.net |
|  | Dec-07 | 2 |  |  | China Crane News 12(1):33 (2008). |
|  | Jan-08 | 1 |  |  | Hongsun2 at www.birdtalker.net |
|  | Mar-08 | 4 |  |  | Jushu at www.birdtalker.net |
| **Shanghai Municipality** |  |  |  |  |  |
| Bihaijinsha | Feb-11 | 5 | 121.5 | 30.8 | http://www.dfdaily.com/html/3/2011/2/20/570046.shtml |
| Fengxian | Nov-08 | 1 | 121.4 | 30.9 | China Birdwatch 70:30 (Dec 2009) |
|  | Dec-08 | 1 |  |  | China Birdwatch 65:24 (Feb 2009) |
|  | Jan-Mar-09 | 1 |  |  | heipee at www.birdtalker.net |
|  | Nov-09 | 1 |  |  | China Birdwatch 70:30 (Dec 2009) |
| QingcaoshaReservior | Jan-11 | 1 | 121.6 | 31.5 | <http://www.shidi.org/sf_9C232BE607154CB2BAF3D3AE4C91AD1A_151_shsd.html> |
| Shanghai | Mar-04 | 1 | 121.4 | 30.9 | Shizaishui at www.birdtalker.net |
| **Sichuan Province** |  |  |  |  |  |
| Guanghan | Nov-09 | 1 | 104.1 | 31 | China Birdwatch 70:30 (Dec 2009) |
| Jinghu, Deyang | Feb-08 | 1 | 104.4 | 31.2 | MIB at www.birdtalker.net |
|  | Feb-08 | 3 |  |  | China Birdwatch 60:24 (April 2008) |
|  | Dec-08 | 2 |  |  | Xingfu at www.birdtalker.net |
| Yazi River | Nov-09 | 1 | 104.2 | 31 | Lvshuiqingshan at www.birdtalker.net |
| **Zhejiang Province** |  |  |  |  |  |
| Cixi, Ningbo | Nov-08 | 3 | 121.2 | 30.2 | China Birdwatch 64:22 (Dec 2008) |
|  | Nov-08 | 3 |  |  | China Birdwatch 64:22 (Dec 2008) |
| Hangzhou | Dec-06 | 1 | 120.1 | 30.4 | <http://tech.qq.com/a/20061228/000114.htm> |
|  | Nov-07 | 1 |  |  | [Piaoboxintianweng at www.birdtalker.net](http://www.birdtalker.net/) |
| Songjiang | Nov-09 | 4 | 119.4 | 28.4 | China Birdwatch 70:30 (Dec 2009) |
| Songyang | Nov-08 | 5 | 119.4 | 28.4 | China Birdwatch 64:22 (Dec 2008) |
|  | Jan-09 | 8 |  |  | sheen at www.birdtalker.net |
|  | Nov-09 | 5 |  |  | http://press.idoican.com.cn/detail/articles/2009120846431/ |

Table S2. Dates and details of rivers and reservoirs surveyed for Scaly-sided Mergansers in China in 2006 and 2007, with indication of the extent of coverage. “Distance” is the surveyed length of a river, or the shoreline of a whole reservoir.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Date** | **Province** | **Reservoir** | **Coverage %** | **River** | **River width (m)** | **River condition** | **Distance (km)** | **Mergansers sighted** |
| 31 Jan/03 Feb 06 | Anhui |  |  | Xin’Anjiang | 20-250 | Slow to fast flowing | 200 | - |
| 1-Feb-06 | Anhui |  |  | Fu ZiShui | 50-140 | Fast flowing, numerous sand banks | 30.3 | - |
| 2-Feb-06 | Anhui |  |  | ShimenShui | 20-50 | Fast flowing, numerous sand banks | 7.9 | - |
|  | Anhui |  |  | Yuan Shi | 20-40 | Fast flowing, numerous sand banks | 4.8 | - |
| 4-Feb-06 | Jiangxi |  |  | Duan Hu Shui | 30-60 | Fast flowing, numerous sand banks | 31.3 | - |
| 04/05 Feb 06 | Jiangxi |  |  | An Le He | 40-200 |  | 70.1 | 31 |
| 24-Jan-08 | Jiangxi | Hongmen | 30 | Litan He | 80-150 | Fast flowing, numerous sand banks | 12.3 | 2 |
| 25-Jan-08 | Jiangxi | Mayuan | 80 | Xu Jiang | 240-500 | Fast flowing, numerous sand banks | 16.6 | - |
|  | Jiangxi | Chemoling | 60 |  |  |  |  |  |
|  | Jiangxi | Tanhu | 40 |  |  |  |  |  |
| 26-Jan-08 | Jiangxi |  |  | Xu Jiang | 240-330 | Fast flowing, numerous sand banks | 50.2 | - |
|  | Jiangxi |  |  | Mei Jiang | 120-220 | Fast flowing, numerous sand banks | 38.2 | - |
|  | Jiangxi |  |  | Qin Jiang | 80-100 | Fast flowing, numerous sand banks | 4 | - |
| 27-Jan-08 | Jiangxi | Longshan | 30 | MianShui | 70-80 | Fast flowing, numerous sand banks | 65.8 | - |
|  | Jiangxi | Chenshi | 40 | Xiang Shui | 40-140 | Slow flowing, muddy | 28.3 | - |
|  | Jiangxi | Shibikeng | 50 | XunwuShui | 60-100 | Fast flowing, numerous sand banks | 3.2 | - |
| 28-Jan-08 | Guangdong | Fengshaba | 5 | XunwuShui | 60-100 | Fast flowing, numerous sand banks | 29.2 | - |
|  | Guangdong |  |  | Dong Jiang | 100-400 | Slow flowing, sand banks | 91.7 | - |
| 29-Jan-08 | Guangdong | Xinfengjiang | 5 | Zeng Jiang | 70-100 | Fast flowing, clear | 5 | - |
|  | Guangdong | Tiantanshang | 80 |  |  |  |  |  |
|  | Guangdong | Liuxihe | 40 |  |  |  |  |  |
| 02 –Feb 08 | Fujian |  |  | Jiuxian | 60-120 | Fast flowing, muddy, sand banks | 23.5 | - |
|  | Fujian |  |  | Pengkou | 40-110 | Fast flowing, muddy | 36 | - |
|  | Fujian |  |  | Wenchuan | 50-80 | Fast flowing, muddy, industry | 38.8 | - |
|  | Fujian |  |  | Xashi | 80-380 | Slow flowing, muddy, sand banks | 121.8 | - |
|  | Fujian |  |  | Fu Tunxi | 90-370 | Slow flowing, muddy, sand banks, plant material | 136 | - |
| 3-Feb-08 | Fujian |  |  | Fu Tunxi | 80-200 | Fast flowing, emergent rock | 27.8 | - |
|  | Jiangxi |  |  | Ta He | 80-150 | Fast flowing, clear | 9 | 16 |
| 4-Feb-08 | Jiangxi |  |  | Xin Jiang | 170-350 | Slow flowing, clear | 3.8 | 22 |
| **TOTALS** |  | **11** |  | **21** |  |  |  | 71 |

Table S3. Mean wintering locations (latitude and longitude + SE) of female Scaly–sided Mergansers fitted with geolocator loggers (for full details see Solovyeva*et al*. 2012).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Winter** | **Logger ID** | **Latitude ± SE** | **N** | **Longitude ± SE** | **N** | **Inferred location** |
| 2006/07 | 7851 | 29.35 ± 0.21 | 181 | 112.97 ± 0.04 | 225 | Dongting Lake, Hunan Province |
| 2007/08 | 7862 | 28.43 ± 0.27 | 114 | 111.98± 0.06 | 248 | Mountains south of Dongting Lake, Hunan Province |
| 2008/09 | 7856 | 24.96 ± 0.23 | 152 | 114.97± 0.06 | 178 | Mountains in extreme southern part of Jiangxi Province, south of Gazhou |
| 2009/10 | 7856 | 24.71 ± 0.31 | 172 | 115.00± 0.09 | 194 | Mountains in extreme southern part of Jiangxi Province, south of Gazhou |
| 2006/07 | 6371 | 27.48 ± 0.30 | 168 | 117.26± 0.07 | 200 | Mountains in north of northern Fujian Province, northwest of Nanping |
| 2007/08 | 6371 | 26.82 ± 0.41 | 163 | 117.70± 0.09 | 184 | Mountains in north of northern Fujian Province, northwest of Nanping |
| 2008/09 | 8532 | 29.48 ± 0.20 | 171 | 115.26± 0.06 | 201 | Mountains in north of Jiangxi Province, north of Wuning |
| 2009/10 | 8532 | 29.06 ± 0.30 | 172 | 115.12± 0.07 | 195 | Mountains in north of Jiangxi Province, south of Wuning |
| 2008/09 | 8566 | 32.50 ± 0.36 | 122 | 109.87 ± 0.12 | 145 | Mountains in NW corner of Hebei Province, west of Shiyan |
| 2009/10 | 8527 | 34.20 ± 0.17 | 219 | 126.85± 0.06 | 281 | Southern part of southern Korea\* |
| 2009/10 | 8554 | 30.49 ± 0.39 | 130 | 110.91± 0.15 | 169 | Mountains in west of Hebei province west of Yichang |

\*The position of this bird has been adjusted to 250 km of the estimated location because of persistent problems associated with this geolocator, (see Solovyeva *et al.* 2012 for full explanation).