

ISSN 1672-5948

CN 32-1383/CN 24-1349/T

中文核心期刊

中国科学引文数据库核心库期刊

中国科技核心期刊



地理科学



劉麗娟、王美蘭、李永祥、徐金蘭、陳建興、陳國華、陳國治、劉子文等(2019)

研究报告

1986—2012 年吉林省图书、报纸、杂志、音像、电子出版物、网络出版物、数字资源出版量统计 (439)

号(446)

一、蔗糖在低盐浓度对土壤水分变化的生理响应研究 王锐明、叶哲英、朱玉

Vol. 14 No. 3 June 2016

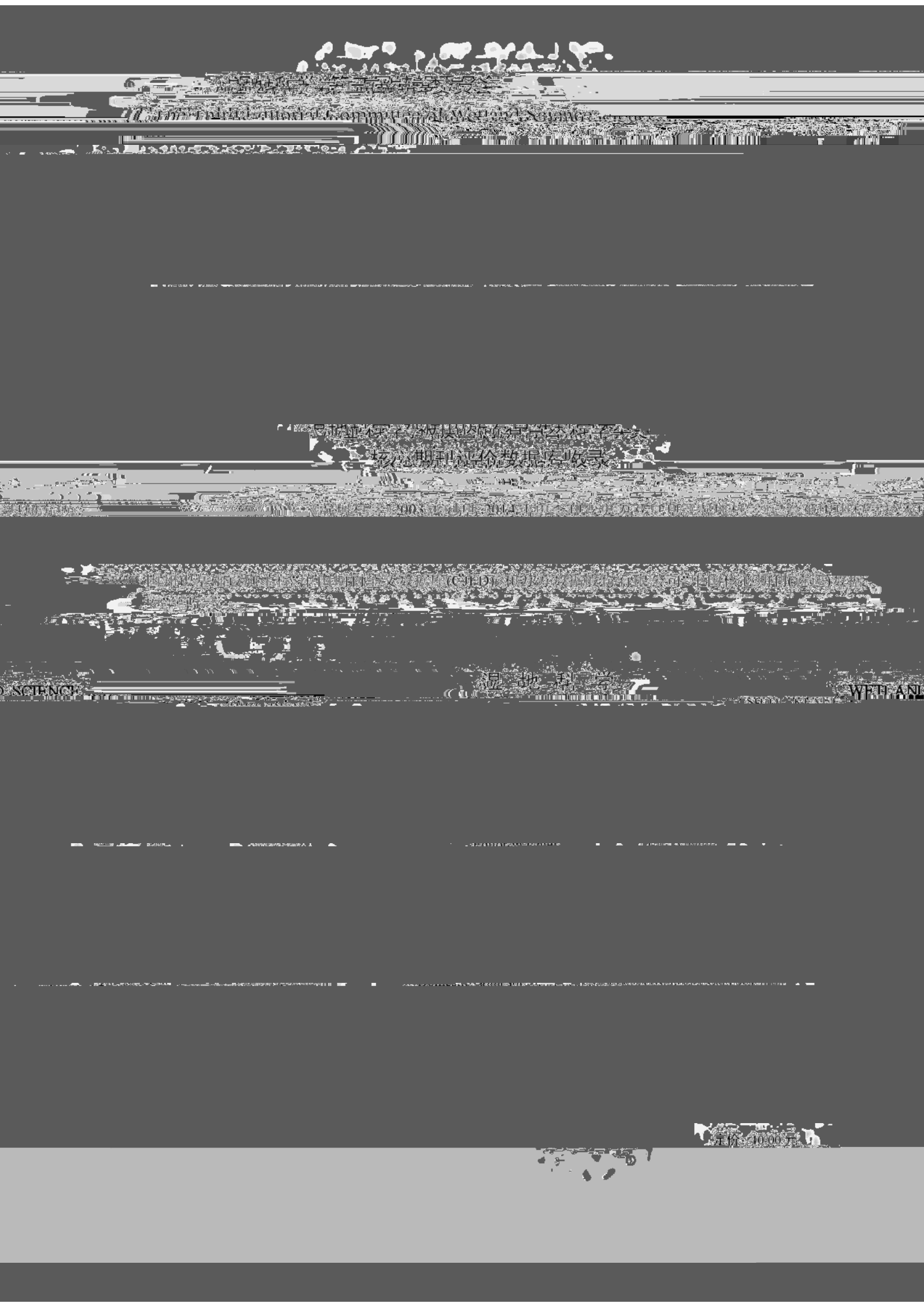
CONTENTS

Migration Routes of Siberian Cranes (*Grus leucurus*) in Spring and Autumn by Satellite Tracking

Seasonal Variation in the Distribution of *Phragmites australis* in the Coastal Wetlands of Lake Dashi

Effects of Land Use Change on the Distribution of *Phragmites australis* in the Coastal Wetlands of Lake Dashi

Effects of Land Use Change on the Distribution of *Phragmites australis* in the Coastal Wetlands of Lake Dashi



2003 年 1 月 1 日 2003 年 1 月 1 日 2003 年 1 月 1 日

2003 年 1 月 1 日 2003 年 1 月 1 日 2003 年 1 月 1 日

2003 年 1 月 1 日 2003 年 1 月 1 日 2003 年 1 月 1 日

2003 年 1 月 1 日 2003 年 1 月 1 日 2003 年 1 月 1 日

~ л н ã м Θ ì è 1.2

м ~ è ã м м

~ è è~ í ш м 23.6 E) Å ,

m d (n=6) √ λ i m̄ ш e C Ñ E e Ō n=4) Â α~

й e У п è

~ ~ ã п e

 e ~ Л e

Л -1 è è м Â H Θ Θ ш

л q шш Ω Ó л q шш ^ ү л г ã~

й 1 050 km² Â л q ш

(Grus grus)CÈ8 (GrusGaP]AôZmRbeDjUSWPAôzôô)xMòQRTEDWYmêFeDgP]ÄY\$0_ôTôE8PX#

py#BP@

GLôRA]SxÜbSPLEZ

CAGLOYL\$ôôYPC^XTôQôôAT8



D Æ † :

п й п х í ' л̣ 50 км̣ п
 200 км̣ Â ÷ Ъ Æ
 ы ÷ п ы 1 500 м̣
 й 1 777 м̣ ÷ п ы
 х ы ч Ѳ Ѵ й
 Â
 Э ы ѿ ÷
 ы è ă (500' 1 000 м̣
 2 116 м) ă ă (700' 1 300 м̣
 2 035 м) ă ă (500' 800 м̣
 1 429 м) ы ă (1 500' 2 000
 м̣ 2 482 м) ăЭ ы (1 000' 2
 000 м̣ 2 389 м) ă (

- [11] Kanai Y, Ueta M, Germogenov N. Important resting areas of Siberian cranes between northeastern Siberia and Mongolia[J]. Biological Conservation, 2012, 152: 1-10.
- [12] Ma Y, Li X. The population and habitat of cranes in the future reserves[C]//The future of cranes: the proceedings of the international symposium held in Tokyo and Sapporo, Japan, 1993: 141-145.
- [13] Zhang F. Conservation of wetlands and the future of cranes and wetlands. Proceedings of the international symposium held in Tokyo and Sapporo, Japan, 1993: 141-145.
- [14] 张福, 李旭, 马彦. 鹤类湿地保护与未来[J]. 保护生物学, 2007, 4(1): 1-10.
- [15] 李旭, 马彦, 张福. 鹤类湿地保护与未来[J]. 保护生物学, 1991, 12(5): 21-24.
- [16] 李旭, 马彦, 张福, James Burnham. 鹤类湿地保护与未来[J]. 保护生物学, 1991, 12(5): 21-24.
- [17] 李旭, 马彦, 张福. 鹤类湿地保护与未来[J]. 保护生物学, 2012, 42(1): 39-43, 51.
- [18] 李旭, 马彦, 张福. 鹤类湿地保护与未来[J]. 保护生物学, 2012, 33(4): 355-361.
- [19] 李旭, 马彦, 张福. 鹤类湿地保护与未来[J]. 保护生物学, 2007, 39(2): 106-111.
- [20] 李旭, 马彦, 张福. 鹤类湿地保护与未来[J]. 保护生物学, 2012: 21-24.
- [21] 李旭, 马彦, 张福. 鹤类湿地保护与未来[J]. 保护生物学, 2007, 42(3): 68-72.
- [22] Rappole J H, King D I, Diez J. Winter-vs. breeding-habitat limitation for an endangered avian migrant[J]. Ecological Applications, 2003, 13(3): 735-742.
- [23] Newberry R C. Environmental enrichment: increasing the biological relevance of captive environments[J]. Applied Animal Behaviour Science, 1995, 44(2): 229-243.

Migration of Siberian Crane (*Grus leucogeranus*) in Spring and Autumn by Satellite Tracking

QIAHUI, QIAN Fawen

(Research Institute of Ecology and Environment, Chinese Academy of Forestry, Beijing 100091, P.R.China)

Abstract: From October 2014, 4 Siberian Cranes (*Grus leucogeranus*) had been installed satellite trackers at stopover and wintering sites. The results showed that 3 birds tracked flew to Poyang Lake as their wintering ground located in the Arctic tundra between lower Yana River and lower Indigirka River of Russia; all important stopover sites were in the marshes of southwest Songnen Nature Reserve and Xianghai National Nature Reserve in Inner Mongolia Autonomous Region; the wetlands in Qiqihar became less important as stopover sites for Siberian Cranes in spring and autumn were roughly similar, but neither strictly matched. The migration distance was $(5\ 594.83 \pm 371.70)$ km ($n=4$) and migration time was (57.51 ± 8.61) h ($n=4$); there is not significant difference on migratory distance and time between spring and autumn migration: $F=1.47$, $p=0.27$; migration time: $F=0.86$, $p=0.39$; difference between tracked birds in spring and autumn migration was not significant. In addition, the research showed that it is feasible to release rescued cranes back to the wild population.

Keywords: *Grus leucogeranus*; satellite tracking; migration strategy