

Surveys of Amphibians of Hainan with Measurement of Rare, Especially Endemic Species

WANG Li-jun, SHI^{*} Hai-tao, HONG Mei-ling, XIONG Yan, WANG Ji-chao, LIANG Wei

(Department of Biology, Hainan Normal University, Haikou, 571158)

Abstract: During 1995 to 2005 the authors carried out many surveys of amphibians on Hainan Island. In addition, specimens also collected by students of Department of Biology, Hainan Normal University in field practice every year. Totally nine hundred fifty-five amphibian specimens deposited in the collections of the Department of Biology were sorted out. Among which thirty-five species belonging to sixteen genera, seven families and two orders are recognized. The results are reported in this paper, and measurement of some endemic to Hainan or rare species are also provided.

Keywords: amphibians; Hainan Island; endemic species

中图分类号: Q959.5 文献标识码: A 文章编号: 1000-7083 (2005) 03-0301-08

海南岛两栖动物调查及珍稀和特有种的测量数据

王力军, 史海涛^{*}, 洪美玲, 熊燕, 汪继超, 梁伟

(海南师范大学生物系, 海口 571158)

摘要: 1995 年至 2005 年对海南岛进行了多次两栖动物调查, 海南师范大学生物系每年进行本科生态学野外实习, 也采集了大量的两栖动物标本。所有标本均保存在生物系标本室内, 经整理编号, 统计共有 955 号, 分类鉴定得 35 种, 分别隶属 16 属 7 科 2 目。本文报道整理结果, 并将其中海南特有种及国内分布区狭窄的个别物种的测量数据加以报道, 以供参考。

关键词: 两栖动物; 海南岛; 特有种

This paper reports the results of amphibian surveys on Hainan Island in more than ten recent years. The descriptions of the collected localities please refer of the same issue of this journal authored by Ermi Zhao and Hui Zhao. The abbreviations for measuring items used in this paper are as follows: SVL (snout-vent length), HL (head length), HW (head width), LS (length of snout), LT (length of tibia) and LF (length of foot).

1 *Echinotriton asperrimus* (Unterstein, 1930)

16 specimens collected from Mt. Diaoluo and Mt. Jianfengling, alt. 600~850 m.

2 *Leptobrachium chapaense* (Bourret, 1937)

Alt. 270~850 m (Table 1).

3 *Bufo melanostictus* Schneider, 1799

10 males, 23 females, 6 subadults. Mt. Wuzhi, Mt. Limu, Mt. Diaoluo, Mt. Bawangling, and Haikou, alt. 20~910 m.

4 *Pelophryne scalpta* (Liu and Hu, 1973)

Endemic to Hainan. Alt. 510~850 m (Table 2).

5 *Hyla simplex* Boettger, 1901

1 male, 3 females. Haikou, alt. 10~50 m.

6 *Kalophrynus pleurostigma interlineatus* (Blyth, 1854)

2 females. Wanling, alt. 320 m.

收稿日期: 2005-06-09 基金项目: 海南省教育厅基金 (No. HJKJ200520)、海南师范学院青年基金 (No. HSQN200409)、海南省生态学重点学科资助项目 (No. 030507)。

作者简介: 王力军 (1974~), 男, 硕士, 讲师, 研究方向: 两栖爬行动物学生态学, E-mail: wanglijun_haikou@sina.com

^{*} 通讯作者 **Acknowledgements:** The authors are grateful to Wei Liang, Yan Xiong, and Department of Biology, Hainan Normal University (HNU), Ermi Zhao, Chengdu Institute of Biology, Chinese Academy of Sciences (CIB) for their collecting specimens during different surveys of this work.

7 *Kaloula pulchra hainana* Gressitt, 1938

Endemic to Hainan. Alt. 20~680 m (Table 3).

Table 1 *Leptobrachium chapaense*

Number	Sex	Date	Locality	SVL	HL	HW	LS	LT	LF
HNU-A0278	J	2001.06.26~07.06	Wuzhishan	32.10	9.96	10.76	5.96	11.88	12.08
HNU-A0279	J	2001.06.26~07.06	Wuzhishan	29.86	11.60	12.22	5.36	11.74	10.90
HNU-A0280	M	2001.06.26~07.06	Wuzhishan	47.78	17.26	20.48	8.60	16.24	16.74
HNU-A0557	M	2003.07.06~07.16	Mt. Limu	48.38	19.88	21.58	8.62	18.20	16.38
HNU-A0604	J	1999.06.24~07.04	Mt. Bawangling	28.84	11.30	11.34	4.70	10.50	10.00
HNU-A0605	F	1999.06.24~07.04	Mt. Bawangling	57.30	22.80	25.80	9.70	20.80	18.80
HNU-A0606	M	1999.06.24~07.04	Mt. Bawangling	50.60	18.00	20.50	7.40	16.20	17.00
HNU-A0607	M	1999.06.24~07.04	Mt. Bawangling	46.56	17.70	19.40	6.88	16.00	15.00
HNU-A0608	M	1999.06.24~07.04	Mt. Bawangling	49.62	18.84	21.00	8.10	16.00	16.10
HNU-A0609	F	1999.06.24~07.04	Mt. Bawangling	55.50	22.16	25.20	10.20	21.40	18.90
HNU-A0716	F	2000.10	Wanling, QZ	56.54	22.58	24.48	10.02	20.88	21.72
HNU-A0950	J	1998.04.09	Mt. Jianfengling	26.26	10.10	9.82	4.52	9.28	9.60
HNU-A0952	F	1999.06.13	Jiayi	63.14	21.32	26.46	10.59	22.13	21.38
HNU-A0955	M	1995.05.20	Niujiaoling	45.85	17.09	21.59	8.47	16.06	14.86

Table 2 *Pelophryne scalpta*

Number	Sex	Date	Locality	SVL	HL	HW	LS	LT	LF
HNU-A0161	M	2002.07.02~07.12	Mt. Diaoluo	22.90	5.70	6.56	2.00	9.52	8.70
HNU-A0560	M	2003.07.06~07.16	Mt. Limu	18.10	6.00	5.50	2.36	7.00	4.70
HNU-A0632	F	1998.06.20~07.10	Mt. Jianfengling	27.00	6.92	6.96	3.72	11.04	8.94
HNU-A0940	M	1999.05.24	Mt. Diaoluo	19.30	6.15	6.36	3.24	8.23	7.92
HNU-A0953	Sub-adult	1999.05.20	Niujiaoling	13.30	4.11	4.49	2.44	5.45	4.38

Table 3 *Kaloula pulchra hainana*

Number	Sex	Date	Locality	SVL	HL	HW	LS	LT	LF
HNU-A0277	M	2001.06.26~07.06	Wuzhishan	49.40	11.88	21.00	3.40	16.10	18.20
HNU-A0413	M	2001.06	Haikou	41.52	9.64	16.56	3.24	12.92	15.54
HNU-A0414	M	2001.06	Haikou	53.54	10.12	22.96	4.10	18.24	20.16
HNU-A0415	M	2001.06	Haikou	69.72	14.10	22.10	4.64	22.88	26.94
HNU-A0416	M	2001.06	Haikou	49.22	8.72	17.40	4.30	17.02	19.00
HNU-A0417	M	2001.06	Haikou	73.90	22.40	22.72	5.46	24.82	23.70

8 *Microhyla butleri* Boulenger, 1900

31 males and 3 females. Mt. Wuzhi, and Xinglong, alt. 50~680 m.

9 *Microhyla heymonsi* Vogt, 1911

20 males and 13 females. Mt. Limu, Mt. Diaoluo, Mt. Bawangling, and Wanling, alt. 280~770 m.

10 *Microhyla ornata* (Duméril and Bibron, 1841)

3 males, 3 females and 1 sex uncertain. Mt.

Wuzhi, and Haikou, alt. 20~670 m.

11 *Microhyla pulchra* (Hallowell, 1861)

40 males and 15 females. Mt. Limu, Mt. Diaoluo, Mt. Wuzhi, Mt. Bawangling, Mt. Jianfengling, Wanling, Ganzaling, Xinglong, and Haikou, alt. 20~730 m.

12 *Amolops hainanensis* (Boulenger, 1900)

Endemic to Hainan. Alt. 270~850 m (Table 4).

Table 4 *Amolops hainanensis*

Number	Sex	Date	Locality	SVL	HL	HW	LS	LT	LF
HNU-A0040	M	2003.07.06~07.16	Mt. Limu	43.62	14.20	16.40	8.40	24.78	20.50
HNU-A0041	M	2003.07.06~07.16	Mt. Limu	40.50	16.28	18.28	9.70	21.48	21.20
HNU-A0042	M	2003.07.06~07.16	Mt. Limu	37.60	13.84	15.30	5.60	21.06	17.50
HNU-A0043	M	2003.07.06~07.16	Mt. Limu	43.30	16.18	17.60	8.30	26.18	21.40
HNU-A0044	M	2003.07.06~07.16	Mt. Limu	45.60	16.18	17.36	9.70	26.68	20.44
HNU-A0045	M	2003.07.06~07.16	Mt. Limu	41.48	15.80	16.00	7.50	23.80	19.42

HNU-A0127	M	2002.07.02~07.12	Mt. Diaoluo	48.14	15.30	18.74	6.74	27.14	22.16
HNU-A0128	M	2002.07.02~07.12	Mt. Diaoluo	40.96	12.82	14.32	6.08	20.82	18.62
HNU-A0275	F	2001.06.26~07.06	Wuzhishan	65.34	20.42	23.94	10.04	34.20	29.20
HNU-A0520	F	2003.03.17	Wanling, QZ	63.00	18.52	25.62	9.48	33.60	30.80
HNU-A0521	F	2003.03.17	Wanling, QZ	61.48	19.10	4.04	9.02	30.86	28.16
HNU-A0522	M	2003.03.17	Wanling, QZ	55.94	16.38	22.20	8.92	29.82	27.06
HNU-A0563	F	2003.07.06~07.16	Mt. Limu	70.40	22.20	25.46	9.60	33.52	25.34
HNU-A0564	M	2003.07.06~07.16	Mt. Limu	43.90	16.38	15.00	6.78	27.32	20.32
HNU-A0594	M	1999.06.24~07.04	Mt. Bawangling	39.48	16.70	13.58	6.52	25.00	20.60
HNU-A0595	M	1999.06.24~07.04	Mt. Bawangling	42.36	17.74	16.18	6.32	27.00	20.30
HNU-A0926	M	2001.09.03~09.04	Mt. Diaoluo	53.44	18.74	20.60	6.40	27.70	23.00
HNU-A0927	M	2001.09.03~09.04	Mt. Diaoluo	45.70	16.80	17.86	6.10	23.90	20.34
HNU-A0943	F	1998.04.06	Mt. Bawangling	67.90	22.44	28.20	10.54	38.36	34.64
HNU-A0944	M	1998.04.07	Mt. Bawangling	30.28	10.91	12.37	5.12	18.96	15.33

13 *Amolops torrentis* (Smith, 1923)

Endemic to Hainan. Alt. 50~850 m (Table 5).

Table 5 *Amolops torrentis*

Number	Sex	Date	Locality	SVL	HL	HW	LS	LT	LF
HNU-A0056	F	2003.07.06~07.16	Mt. Limu	34.25	8.80	10.10	4.45	19.45	16.30
HNU-A0057	M	2003.07.06~07.16	Mt. Limu	28.40	7.90	9.15	4.45	18.00	15.90
HNU-A0058	F	2003.07.06~07.16	Mt. Limu	39.05	10.05	11.45	4.55	20.30	17.00
HNU-A0059	M	2003.07.06~07.16	Mt. Limu	28.40	8.55	9.40	4.60	17.00	14.70
HNU-A0060	F	2003.07.06~07.16	Mt. Limu	37.70	10.00	11.30	5.30	21.05	17.80
HNU-A0061	M	2003.07.06~07.16	Mt. Limu	28.75	8.85	9.35	4.55	17.55	15.70
HNU-A0064	F	2003.07.06~07.16	Mt. Limu	36.20	9.85	10.30	5.10	21.05	19.00
HNU-A0065	M	2003.07.06~07.16	Mt. Limu	27.60	8.60	9.35	4.35	15.80	14.40
HNU-A0067	F	2003.07.06~07.16	Mt. Limu	35.85	10.55	11.25	5.30	21.75	18.15
HNU-A0068	F	2003.07.06~07.16	Mt. Limu	36.10	9.85	10.40	4.95	20.85	17.35
HNU-A0074	F	2003.07.06~07.16	Mt. Limu	35.85	9.80	10.50	4.55	21.05	17.85
HNU-A0085	F	2003.07.06~07.16	Mt. Limu	34.40	9.90	10.25	4.70	19.50	16.45
HNU-A0086	M	2003.07.06~07.16	Mt. Limu	29.75	8.90	9.30	4.25	17.20	14.95
HNU-A0136	M	2002.07.02~07.12	Mt. Diaoluo	32.26	10.00	11.00	3.10	18.00	15.40
HNU-A0137	F	2002.07.02~07.12	Mt. Diaoluo	35.74	11.42	11.50	3.36	20.40	18.00
HNU-A0138	F	2002.07.02~07.12	Mt. Diaoluo	35.40	11.48	11.18	3.34	19.94	16.70
HNU-A0139	M	2002.07.02~07.12	Mt. Diaoluo	30.18	9.36	10.26	3.10	18.24	15.10
HNU-A0140	M	2002.07.02~07.12	Mt. Diaoluo	28.40	6.20	9.72	3.64	16.50	14.72
HNU-A0141	M	2002.07.02~07.12	Mt. Diaoluo	30.50	9.40	10.44	3.40	18.00	16.00
HNU-A0142	F	2002.07.02~07.12	Mt. Diaoluo	36.88	11.78	12.00	3.80	20.40	17.30
HNU-A0143	F	2002.07.02~07.12	Mt. Diaoluo	37.00	11.50	12.48	3.42	21.64	18.44
HNU-A0144	M	2002.07.02~07.12	Mt. Diaoluo	28.00	9.26	9.50	3.10	16.28	15.32
HNU-A0145	M	2002.07.02~07.12	Mt. Diaoluo	30.80	10.80	10.60	3.20	18.00	14.10
HNU-A0146	F	2002.07.02~07.12	Mt. Diaoluo	35.10	11.40	11.50	3.64	21.00	18.00
HNU-A0333	M	2001.06.26~07.06	Wuzhishan	26.81	8.81	8.78	3.80	17.74	13.51
HNU-A0334	F	2001.06.26~07.06	Wuzhishan	33.91	11.27	11.29	5.13	19.64	17.42
HNU-A0335	M	2001.06.26~07.06	Wuzhishan	27.97	8.89	9.31	3.85	17.29	14.98
HNU-A0336	M	2001.06.26~07.06	Wuzhishan	28.81	8.51	9.41	4.19	16.82	15.50
HNU-A0344	M	2001.06.26~07.06	Wuzhishan	25.91	7.72	9.67	4.53	17.26	13.03
HNU-A0346	F	2001.06.26~07.06	Wuzhishan	35.97	10.34	10.53	4.57	19.40	15.33
HNU-A0347	M	2001.06.26~07.06	Wuzhishan	25.50	8.96	8.41	4.05	17.25	14.17
HNU-A0348	M	2001.06.26~07.06	Wuzhishan	27.77	8.69	9.52	3.99	18.62	12.83
HNU-A0349	M	2001.06.26~07.06	Wuzhishan	25.74	9.26	10.44	4.49	18.64	14.45
HNU-A0351	F	2001.06.26~07.06	Wuzhishan	36.07	11.06	11.38	4.94	22.25	18.85
HNU-A0353	F	2001.06.26~07.06	Wuzhishan	38.86	11.70	11.21	5.04	21.33	18.02
HNU-A0355	F	2001.06.26~07.06	Wuzhishan	33.61	10.95	11.13	5.13	21.58	16.49
HNU-A0357	F	2001.06.26~07.06	Wuzhishan	36.98	10.28	11.70	4.89	21.59	17.96
HNU-A0364	M	2001.06.26~07.06	Wuzhishan	25.90	8.12	9.10	3.83	16.43	12.61

HNU-A0370	F	2001.06.26~07.06	Wuzhishan	36.74	10.81	10.91	5.36	21.56	16.85
HNU-A0372	F	2001.06.26~07.06	Wuzhishan	27.13	8.73	8.89	4.15	17.05	13.62
HNU-A0373	F	2001.06.26~07.06	Wuzhishan	34.23	9.92	11.00	4.73	20.97	16.55
HNU-A0430	F	2003.03.29	Wanling, QZ	34.65	10.40	11.00	4.50	19.30	16.60
HNU-A0431	M	2003.03.29	Wanling, QZ	28.70	8.60	8.55	4.20	15.45	14.55
HNU-A0432	M	2003.03.29	Wanling, QZ	27.00	9.45	8.70	4.55	17.20	14.00
HNU-A0433	M	2003.03.29	Wanling, QZ	27.75	8.45	8.35	3.95	15.05	13.30
HNU-A0523	F	2003.03.17	Wanling, QZ	33.60	11.28	10.70	4.42	20.00	17.10
HNU-A0524	M	2003.03.17	Wanling, QZ	25.50	9.12	9.16	3.14	16.28	14.42
HNU-A0525	M	2003.03.17	Wanling, QZ	27.06	9.60	9.50	3.70	16.40	15.30
HNU-A0526	M	2003.03.17	Wanling, QZ	27.40	9.46	9.60	3.26	16.70	14.90
HNU-A0527	F	2003.03.17	Wanling, QZ	33.60	10.80	10.10	3.50	19.00	17.10
HNU-A0567	M	2003.07.06~07.16	Mt. Limu	25.42	9.82	8.40	4.24	17.00	14.14
HNU-A0568	M	2003.07.06~07.16	Mt. Limu	26.24	10.00	8.34	4.32	16.76	14.00
HNU-A0569	F	2003.07.06~07.16	Mt. Limu	35.94	12.00	10.36	5.00	21.32	18.24
HNU-A0610	M	1999.06.24~07.04	Mt. Bawangling	25.00	9.84	8.32	4.40	15.64	14.20
HNU-A0611	M	1999.06.24~07.04	Mt. Bawangling	26.78	10.38	8.88	4.62	17.84	13.64
HNU-A0612	F	1999.06.24~07.04	Mt. Bawangling	35.38	12.00	9.60	5.42	19.26	17.90
HNU-A0613	M	1999.06.24~07.04	Mt. Bawangling	28.32	10.92	8.64	4.88	17.26	14.20
HNU-A0614	F	1999.06.24~07.04	Mt. Bawangling	37.00	12.00	10.32	4.96	19.42	17.42
HNU-A0615	F	1999.06.24~07.04	Mt. Bawangling	38.30	13.00	10.40	4.70	22.26	17.96
HNU-A0616	F	1999.06.24~07.04	Mt. Bawangling	37.96	12.54	10.00	5.46	20.52	16.66
HNU-A0683	M	1998.06.20~07.10	Mt. Jianfengling	28.83	9.17	9.84	4.41	18.39	13.97
HNU-A0684	M	1998.06.20~07.10	Mt. Jianfengling	26.46	9.22	9.88	4.27	17.42	14.56
HNU-A0686	M	1998.06.20~07.10	Mt. Jianfengling	27.84	8.94	9.39	4.03	17.50	14.10
HNU-A0689	M	1998.06.20~07.10	Mt. Jianfengling	26.10	8.99	9.31	4.39	17.54	13.15
HNU-A0690	M	1998.06.20~07.10	Mt. Jianfengling	27.44	9.49	10.37	4.37	17.11	13.80
HNU-A0692	F	1998.06.20~07.10	Mt. Jianfengling	34.63	10.37	11.04	5.39	21.07	17.55
HNU-A0693	M	1998.06.20~07.10	Mt. Jianfengling	30.15	9.36	9.95	4.71	18.60	15.10
HNU-A0694	M	1998.06.20~07.10	Mt. Jianfengling	28.18	9.56	10.05	4.18	16.73	12.90
HNU-A0695	M	1998.06.20~07.10	Mt. Jianfengling	28.91	8.91	9.81	4.42	18.28	15.52
HNU-A0696	M	1998.06.20~07.10	Mt. Jianfengling	27.13	9.76	9.97	4.39	18.71	14.39
HNU-A0698	F	1998.06.20~07.10	Mt. Jianfengling	36.21	11.05	12.30	5.10	20.71	17.01
HNU-A0700	M	1998.06.20~07.10	Mt. Jianfengling	27.81	8.93	9.59	4.34	17.02	13.56
HNU-A0702	M	1998.06.20~07.10	Mt. Jianfengling	29.25	9.56	9.94	4.37	17.84	14.07
HNU-A0703	M	1998.06.20~07.10	Mt. Jianfengling	27.33	9.31	9.38	4.33	18.30	14.06
HNU-A0704	M	1998.06.20~07.10	Mt. Jianfengling	27.41	9.38	9.73	4.52	17.96	13.63
HNU-A0705	M	1998.06.20~07.10	Mt. Jianfengling	25.79	8.47	8.99	4.01	16.23	12.16
HNU-A0714	M	2000.10~01.05	Wanling, QZ	26.95	8.35	8.65	4.15	16.05	14.65
HNU-A0872	M	1998.03.14	Haikou	32.48	10.52	10.30	4.00	16.50	16.84
HNU-A0918	M	2001.09.03	Mt. Diaoluo	26.56	9.00	9.00	4.00	13.71	15.52
HNU-A0919	M	2001.09.03	Mt. Diaoluo	27.66	9.14	9.62	4.12	19.00	14.22
HNU-A0920	M	2001.09.03	Mt. Diaoluo	28.52	11.00	9.30	4.14	17.70	14.80
HNU-A0921	M	2001.09.03	Mt. Diaoluo	29.72	10.30	9.90	4.52	19.44	15.26
HNU-A0951	M	1999.06.13	Jiayi	28.22	8.72	9.56	4.72	16.91	14.05

14 *Occidozyga lima* (Gravenhorst, 1829)

One specimen HNU-A0478, sex uncertain, collected from Wenchang on 15 March 2003, alt. 50 m. SVL 23.26, HL 5.12, HW 8.42, LS 3.58, LT 13.56, LF 11.85.

15 *Occidozyga martensii* (Peters, 1867)

15 males, 5 females, 20 sex uncertain. Mt.

Limu, Mt. Diaoluo, Mt. Bawangling, Wanling, Ganzaling, and Haikou, alt. 10~820 m.

16 *Rana andersonii* Boulenger, 1882

13 males and 2 females. Mt. Limu, Mt. Diaoluo, and Wanling, alt. 270~680 m.

17 *Rana cancrivora* Gravenhorst, 1829 (Table 6)

Table 6 *Rana cancrivora*

Number	Sex	Date	Locality	SVL	HL	HW	LS	LT	LF
HNU-A0446	M	2003.03.29	Dongzhaigang, Haikou	64.40	22.22	19.30	11.00	29.62	34.32
HNU-A0447	M	2003.03.29	Dongzhaigang, Haikou	56.78	19.74	18.98	9.82	27.02	29.64
HNU-A0448	F	2003.03.29	Dongzhaigang, Haikou	62.66	21.18	21.68	10.78	29.00	35.20
HNU-A0449	F	2003.03.29	Dongzhaigang, Haikou	75.98	24.92	24.68	13.00	34.02	38.12
HNU-A0450	F	2003.03.29	Dongzhaigang, Haikou	76.08	22.40	25.50	12.46	33.84	38.72
HNU-A0451	M	2003.03.29	Dongzhaigang, Haikou	61.56	19.08	21.84	10.30	29.42	31.38
HNU-A0452	M	2003.03.29	Dongzhaigang, Haikou	59.44	19.72	19.52	10.70	27.88	30.90
HNU-A0453	F	2003.03.29	Dongzhaigang, Haikou	81.26	25.08	26.28	14.00	35.50	39.10
HNU-A0454	F	2003.03.29	Dongzhaigang, Haikou	82.78	23.02	26.08	13.40	36.22	37.30
HNU-A0455	M	2003.03.29	Dongzhaigang, Haikou	59.62	19.02	19.30	10.68	27.68	31.82
HNU-A0456	M	2003.03.29	Dongzhaigang, Haikou	55.30	18.34	18.64	9.48	26.38	29.46
HNU-A0566	F	2003.07.18	Dongzhaigang, Haikou	82.00	26.10	28.20	13.30	36.85	39.60

18 *Rana fragilis* Liu and Hu, 1973

Endemic to Hainan. Alt. 10~810 m (Table 7).

Table 7 *Rana fragilis*

Number	Sex	Date	Locality	SVL	HL	HW	LS	LT	LF
HNU-A0029	F	2003.07.06~07.16	Mt. Limu	56.68	21.16	21.00	13.70	26.50	23.45
HNU-A0030	F	2003.07.06~07.16	Mt. Limu	53.74	26.18	21.30	12.12	24.40	24.10
HNU-A0148	F	2000.07.02~12	Mt. Diaoluo	43.60	14.65	17.00	5.80	19.55	18.55
HNU-A0285	M	2001.06.26~07.06	Wuzhishan	48.80	17.60	20.00	5.00	24.72	21.40
HNU-A0286	Sub-adult	2001.06.26~07.06	Wuzhishan	33.42	11.60	14.20	3.42	16.00	14.10
HNU-A0287	F	2001.06.26~07.06	Wuzhishan	61.60	21.78	25.70	7.70	28.84	27.10
HNU-A0476	F	1998.03~04	Wanling, QZ	69.20	23.60	25.50	12.45	34.30	32.85
HNU-A0477	F	1998.03~04	Wanling, QZ	68.10	21.45	25.75	11.35	33.55	33.10
HNU-A0517	Sub-adult	2003.03.17	Wanling, QZ	21.90	7.60	9.00	3.12	10.50	10.40
HNU-A0561	M	2003.07.06~07.16	Mt. Limu	36.48	14.20	15.80	4.30	17.60	17.30
HNU-A0562	F	2003.07.06~07.16	Mt. Limu	65.10	25.40	26.80	7.50	28.44	28.10
HNU-A0617	M	1999.06.24~07.04	Mt. Bawangling	39.20	13.48	16.04	6.04	20.00	18.54
HNU-A0618	F	1999.06.24~07.04	Mt. Bawangling	53.20	16.48	20.96	8.74	25.28	24.16
HNU-A0619	M	1999.06.24~07.04	Mt. Bawangling	44.42	15.00	16.96	6.24	19.46	18.84
HNU-A0620	Sub-adult	1999.06.24~07.04	Mt. Bawangling	32.06	11.70	13.34	5.14	15.70	13.80
HNU-A0621	F	1999.06.24~07.04	Mt. Bawangling	40.06	11.14	15.40	5.84	18.60	16.44
HNU-A0622	M	1999.06.24~07.04	Mt. Bawangling	45.90	16.88	16.48	7.12	22.22	18.62
HNU-A0623	F	1999.06.24~07.04	Mt. Bawangling	48.18	15.08	18.20	6.84	22.46	21.14
HNU-A0624	M	1999.06.24~07.04	Mt. Bawangling	40.16	13.62	15.20	6.30	18.82	18.02
HNU-A0625	F	1999.06.24~07.04	Mt. Bawangling	58.14	19.78	24.32	8.48	25.84	25.36
HNU-A0626	F	1999.06.24~07.04	Mt. Bawangling	47.97	14.78	18.76	6.88	22.26	21.58
HNU-A0627	F	1999.06.24~07.04	Mt. Bawangling	47.38	16.36	18.70	6.54	21.94	20.72
HNU-A0628	F	1999.06.24~07.04	Mt. Bawangling	49.90	21.58	22.26	8.20	25.90	16.62
HNU-A0629	M	1999.06.24~07.04	Mt. Bawangling	46.98	17.46	19.22	7.38	21.82	20.76
HNU-A0630	F	1999.06.24~07.04	Mt. Bawangling	47.76	15.02	18.50	6.94	22.44	20.70
HNU-A0631	M	1999.06.24~07.04	Mt. Bawangling	49.96	17.40	19.08	7.46	22.16	21.32
HNU-A0661	F	1998.06.20~07.10	Mt. Jianfengling	56.69	19.44	23.91	7.73	26.44	23.07
HNU-A0662	F	1998.06.20~07.10	Mt. Jianfengling	46.56	16.07	18.65	7.36	21.11	18.73
HNU-A0663	F	1998.06.20~07.10	Mt. Jianfengling	38.93	13.78	15.09	5.51	19.08	17.49
HNU-A0664	Sub-adult	1998.06.20~07.10	Mt. Jianfengling	21.54	7.74	7.71	3.61	9.53	9.14
HNU-A0665	F	1998.06.20~07.10	Mt. Jianfengling	52.74	17.58	20.77	7.12	23.84	21.83
HNU-A0666	F	1998.06.20~07.10	Mt. Jianfengling	47.65	16.03	18.46	6.25	22.37	20.56
HNU-A0667	F	1998.06.20~07.10	Mt. Jianfengling	39.47	13.75	15.90	5.67	19.22	16.75
HNU-A0668	F	1998.06.20~07.10	Mt. Jianfengling	43.98	15.50	18.57	6.44	22.30	19.09
HNU-A0669	F	1998.06.20~07.10	Mt. Jianfengling	53.09	17.19	21.10	7.59	24.45	22.68
HNU-A0670	F	1998.06.20~07.10	Mt. Jianfengling	35.21	12.54	14.51	5.89	16.79	14.71
HNU-A0671	M	1998.06.20~07.10	Mt. Jianfengling	37.11	13.68	15.67	6.56	19.28	16.39
HNU-A0672	Sub-adult	1998.06.20~07.10	Mt. Jianfengling	27.15	8.71	10.35	4.90	13.06	11.78
HNU-A0673	F	1998.06.20~07.10	Mt. Jianfengling	50.01	15.65	19.77	7.03	22.75	21.17

HNU-A0674	F	1998.06.20~07.10	Mt. Jianfengling	56.95	19.02	21.53	7.86	25.13	22.77
HNU-A0675	F	1998.06.20~07.10	Mt. Jianfengling	46.53	16.46	17.96	7.47	22.47	21.53
HNU-A0676	M	1998.06.20~07.10	Mt. Jianfengling	53.07	19.63	23.97	7.64	27.30	23.48
HNU-A0677	F	1998.06.20~07.10	Mt. Jianfengling	45.35	15.84	18.27	6.27	21.90	19.96
HNU-A0678	F	1998.06.20~07.10	Mt. Jianfengling	60.30	20.79	25.44	8.92	27.19	23.77
HNU-A0679	F	1998.06.20~07.10	Mt. Jianfengling	52.07	16.92	19.52	7.31	26.04	20.98
HNU-A0680	F	1998.06.20~07.10	Mt. Jianfengling	45.32	16.28	18.75	6.56	23.76	20.71
HNU-A0715	F	2000.10~01.05	Wanling, QZ	55.60	15.20	19.60	8.95	26.35	23.15
HNU-A0813	M	1997.07.11~07.29	Haikou	49.92	16.82	16.76	8.46	22.16	26.44
HNU-A0814	M	1997.07.11~07.29	Haikou	39.60	12.96	13.90	7.60	19.26	21.34
HNU-A0815	M	1997.07.11~07.29	Haikou	44.22	14.60	14.12	7.80	19.38	21.60
HNU-A0816	M	1997.07.11~07.29	Haikou	44.40	14.72	14.28	7.28	19.70	23.28
HNU-A0817	M	1997.07.11~07.29	Haikou	58.88	18.18	20.74	9.80	27.66	26.22
HNU-A0818	M	1997.07.11~07.29	Haikou	42.52	13.94	15.22	8.38	20.20	21.78
HNU-A0819	M	1997.07.11~07.29	Haikou	52.26	16.84	18.30	9.70	23.12	23.40
HNU-A0820	M	1997.07.11~07.29	Haikou	54.34	18.22	19.02	9.62	25.60	27.86
HNU-A0821	M	1997.07.11~07.29	Haikou	46.26	15.32	15.66	7.68	20.64	23.54
HNU-A0822	M	1997.07.11~07.29	Haikou	46.70	14.36	14.00	7.92	30.40	22.82
HNU-A0823	M	1997.07.11~07.29	Haikou	39.96	13.68	13.74	7.20	18.42	20.78
HNU-A0824	M	1997.07.11~07.29	Haikou	65.78	21.12	22.20	11.30	29.94	34.10
HNU-A0825	M	1997.07.11~07.29	Haikou	47.18	14.44	16.08	8.72	21.70	23.92
HNU-A0826	M	1997.07.11~07.29	Haikou	48.28	15.94	16.36	9.02	21.18	25.00
HNU-A0827	M	1997.07.11~07.29	Haikou	54.00	18.00	18.54	8.74	24.14	28.50
HNU-A0928	F	2001.09.03	Mt. Diaoluo	49.52	19.56	18.00	7.32	23.32	20.58
HNU-A0929	M	2001.09.03	Mt. Diaoluo	38.22	14.62	12.22	5.98	18.22	17.72
HNU-A0930	F	2001.09.03	Mt. Diaoluo	48.00	16.00	17.10	7.12	22.34	19.30
HNU-A0945	F	1998.04.04	Mt. Bawangling	60.75	20.38	26.67	9.80	28.32	25.60

19 *Rana guentheri* Boulenger, 1882

9 males and 14 females · Mt · Limu, Mt · Diaoluo, Mt · Wuzhi, Mt · Jianfengling, Wanling, and Haikou, alt. 10~850 m.

20 *Rana limnocharis* Boie, 1834

29 males, 47 females and 1 subadult · Mt · Limu, Mt · Diaoluo, Mt · Wuzhi, Mt · Jianfengling, Wanling, and Haikou, alt. 10~820 m.

21 *Rana livida* (Blyth, 1856)

7 males and 7 females · Mt · Limu, Mt · Diaoluo, and Wanling, alt. 270~680 m.

22 *Rana macrodactyla* (Günther, 1859)

12 males and 8 females · Wenchang and Haikou, alt. 10~310 m.

23 *Rana nigrotympanica* Dubois, 1992

One specimen was observed and photographed by Ji-chao Wang in Mt · Diaoluo, alt. 680 m.

24 *Rana rugulosa* Wiegmann, 1835

2 males and 2 females · Wanling and Haikou, alt. 10~270 m.

25 *Rana spinulosa* Smith, 1923

Endemic to Hainan · Alt. 310~650 m (Table 8).

Table 8 *Rana spinulosa*

Number	Sex	Date	Locality	SVL	HL	HW	LS	LT	LF
HNU-A0055	M	2003.07.06~07.16	Mt · Limu	39.32	13.14	12.64	6.00	20.18	20.40
HNU-A0129	M	2000.07.02~12	Mt · Diaoluo	42.95	15.45	13.65	6.85	22.95	22.30
HNU-A0130	M	2000.07.02~12	Mt · Diaoluo	41.95	14.10	14.45	6.20	22.25	22.00
HNU-A0292	F	2001.06.26~07.06	Wuzhishan	56.56	18.48	18.07	6.93	32.52	27.46
HNU-A0293	M	2001.06.26~07.06	Wuzhishan	28.44	12.93	12.24	5.05	22.20	20.31
HNU-A0294	M	2001.06.26~07.06	Wuzhishan	40.50	15.70	13.28	5.51	14.17	20.94
HNU-A0295	M	2001.06.26~07.06	Wuzhishan	37.66	13.93	11.87	5.45	21.24	18.70
HNU-A0458	M	2003.03.29	Wanling, QZ	38.64	14.58	11.90	5.30	21.90	21.66
HNU-A0528	M	2003.03.17	Wanling, QZ	40.80	13.40	13.00	4.92	21.68	21.30
HNU-A0529	M	2003.03.17	Wanling, QZ	37.80	14.76	12.76	.62	21.10	21.60
HNU-A0530	M	2003.03.17	Wanling, QZ	37.00	13.00	11.88	4.42	19.62	20.10

HNU-A0531	M	2003.03.17	Wanling, QZ	37.40	14.50	13.00	4.42	21.18	21.38
HNU-A0532	M	2003.03.17	Wanling, QZ	39.00	13.70	13.00	4.70	20.80	21.88
HNU-A0570	M	2003.07.06~07.16	Mt. Limu	34.55	12.50	11.60	5.60	17.80	17.22
HNU-A0571	M	2003.07.06~07.16	Mt. Limu	42.10	15.25	13.45	6.85	21.70	20.70
HNU-A0572	M	2003.07.06~07.16	Mt. Limu	36.00	13.30	12.25	5.80	19.65	18.55
HNU-A0596	M	1999.06.24~07.04	Mt. Bawangling	39.92	15.30	13.40	5.20	20.80	18.54
HNU-A0597	M	1999.06.24~07.04	Mt. Bawangling	36.18	14.76	12.10	4.82	19.00	18.30
HNU-A0598	M	1999.06.24~07.04	Mt. Bawangling	38.54	14.80	12.90	5.00	20.70	19.82
HNU-A0635	F	1998.06.20~07.10	Mt. Jianfengling	48.84	16.30	16.90	7.12	26.28	25.66
HNU-A0931	F	2001.09.03~07.06	Mt. Diaoluo	51.48	18.80	17.36	6.80	25.00	25.50
HNU-A0932	F	2001.09.03~07.06	Mt. Diaoluo	55.20	19.72	19.10	7.00	29.00	28.00
HNU-A0933	M	2001.09.03~07.06	Mt. Diaoluo	41.12	16.88	14.42	6.30	22.00	21.40
HNU-A0938	F	1999.05.24	Mt. Diaoluo	53.57	16.82	17.30	7.55	25.28	24.67
HNU-A0942	M	1998.04.06	Mt. Bawangling	37.64	13.31	13.47	6.19	20.57	20.77

26 *Rana taipehensis* VanDenburgh, 1909

11 males, 1 female and 5 sex uncertain. Mt. Wuzhi, Mt. Limu, Mt. Bawangling, and Ganzaling, alt. 510~870 m.

27 *Rana tiannanensis* Yang and Li, 1980

2 males and 10 females. Mt. Limu, Mt. Diaoluo,

Mt. Wuzhi, and Wanling, alt. 270~680 m.

28 *Rana versabilis* Liu and Hu, 1962

2 females, Mt. Limu, alt. 680 m.

29 *Buergeria oxycephala* (Boulenger, 1900)

Endemic to Hainan. Alt. 270~720 m (Table 9).

Table 9 *Buergeria oxycephala*

Number	Sex	Date	Locality	SVL	HL	HW	LS	LT	LF
HNU-A0112	M	2003.07.06~16	Mt. Limu	34.61	10.58	11.53	6.40	19.88	15.60
HNU-A0113	M	2003.07.06~16	Mt. Limu	31.22	11.44	12.50	6.20	21.80	18.30
HNU-A0114	M	2003.07.06~16	Mt. Limu	34.00	13.10	12.56	5.50	19.54	16.58
HNU-A0115	M	2003.07.06~16	Mt. Limu	35.76	12.50	12.30	5.76	20.00	17.66
HNU-A0116	M	2003.07.06~16	Mt. Limu	38.20	12.50	13.00	5.50	21.64	19.16
HNU-A0117	M	2003.07.06~16	Mt. Limu	36.48	13.60	13.40	5.20	20.70	17.76
HNU-A0118	M	2003.07.06~16	Mt. Limu	39.90	12.00	12.20	5.50	19.42	16.86
HNU-A0119	F	2003.07.06~16	Mt. Limu	62.60	19.64	21.88	8.54	34.64	29.20
HNU-A0120	F	2003.07.06~16	Mt. Limu	47.74	16.32	16.88	8.10	28.12	23.90
HNU-A0121	F	2003.07.06~16	Mt. Limu	56.48	18.16	18.20	8.18	33.34	25.70
HNU-A0122	F	2003.07.06~16	Mt. Limu	61.42	21.00	21.80	9.00	33.30	29.32
HNU-A0123	F	2003.07.06~16	Mt. Limu	57.20	18.82	20.54	7.90	33.50	29.50
HNU-A0162	M	2002.07.02~12	Mt. Diaoluo	39.10	12.96	12.34	6.88	21.96	18.40
HNU-A0163	M	2002.07.02~12	Mt. Diaoluo	35.22	12.88	12.00	6.34	20.00	17.36
HNU-A0164	M	2002.07.02~12	Mt. Diaoluo	37.76	14.40	12.68	6.50	20.48	18.00
HNU-A0165	M	2002.07.02~12	Mt. Diaoluo	39.60	13.74	14.14	6.98	22.72	19.40
HNU-A0166	M	2002.07.02~12	Mt. Diaoluo	36.68	11.88	10.92	5.24	21.58	16.70
HNU-A0167	M	2002.07.02~12	Mt. Diaoluo	37.86	12.98	12.00	6.28	20.62	18.32
HNU-A0168	M	2002.07.02~12	Mt. Diaoluo	41.18	14.62	13.86	7.20	24.00	19.94
HNU-A0169	M	2002.07.02~12	Mt. Diaoluo	36.38	12.46	11.70	6.00	21.64	18.24
HNU-A0170	M	2002.07.02~12	Mt. Diaoluo	35.90	12.10	12.00	5.58	20.22	18.64
HNU-A0171	M	2002.07.02~12	Mt. Diaoluo	37.00	12.78	12.46	5.52	20.92	17.34
HNU-A0172	M	2002.07.02~12	Mt. Diaoluo	41.00	14.28	13.00	6.98	23.00	20.28
HNU-A0241	M	2002.07.02~07.12	Mt. Diaoluo	37.80	13.32	13.60	5.80	20.80	18.40
HNU-A0296	F	2001.06.26~07.06	Wuzhishan	61.84	18.72	21.46	10.22	33.64	29.94
HNU-A0297	F	2001.06.26~07.06	Wuzhishan	58.10	17.80	19.70	9.88	32.56	27.84
HNU-A0298	M	2001.06.26~07.06	Wuzhishan	37.22	14.28	12.34	5.94	21.34	17.80
HNU-A0299	M	2001.06.26~07.06	Wuzhishan	40.28	12.16	12.84	6.36	22.70	19.00
HNU-A0300	F	2001.06.26~07.06	Wuzhishan	57.00	16.94	19.00	10.06	29.94	27.86
HNU-A0427	M	2003.03.29	Wanling, QZ	35.48	13.10	11.88	6.10	21.62	18.00
HNU-A0428	F	2003.03.29	Wanling, QZ	60.88	21.32	19.84	10.62	36.00	29.42
HNU-A0429	M	2003.03.29	Wanling, QZ	36.28	14.02	12.90	6.72	22.18	19.66

HNU-A0468	F	1998.03~04	Wanling, QZ	52.20	16.45	19.25	9.25	28.95	25.45
HNU-A0469	F	1998.03~04	Wanling, QZ	62.60	19.60	19.80	11.10	36.30	32.90
HNU-A0539	M	2003.03.17	Wanling, QZ	35.08	11.88	12.20	6.32	20.58	17.68
HNU-A0540	F	2003.03.17	Wanling, QZ	62.66	17.92	22.68	10.48	38.12	32.22
HNU-A0541	M	2003.03.17	Wanling, QZ	33.46	11.84	11.52	6.50	19.88	16.84
HNU-A0542	F	2003.03.17	Wanling, QZ	65.58	19.40	22.38	10.44	37.06	32.36
HNU-A0543	F	2003.03.17	Wanling, QZ	63.58	19.60	22.82	11.58	38.88	31.86
HNU-A0544	F	2003.03.17	Wanling, QZ	57.50	16.00	20.28	10.32	32.60	28.02
HNU-A0545	M	2003.03.17	Wanling, QZ	36.00	12.36	12.12	6.96	20.84	17.86
HNU-A0546	M	2003.03.17	Wanling, QZ	39.44	13.38	13.60	8.20	21.48	19.72
HNU-A0547	F	2003.03.17	Wanling, QZ	63.14	18.54	21.12	9.86	35.70	30.66
HNU-A0548	F	2003.03.17	Wanling, QZ	61.08	16.62	21.34	10.20	36.62	30.56
HNU-A0576	F	2003.07.06~07.16	Mt. Limu	59.50	19.10	20.50	10.00	35.10	31.25
HNU-A0577	M	2003.07.06~07.16	Mt. Limu	37.60	13.25	13.35	6.40	21.20	16.75
HNU-A0578	F	2003.07.06~07.16	Mt. Limu	60.75	20.20	21.50	11.15	34.10	32.00
HNU-A0591	F	1999.06.24~07.04	Mt. Bawangling	52.01	16.41	19.35	9.21	30.90	23.98
HNU-A0941	F	1999.05.27	Mt. Diaoluo	51.38	15.96	17.48	9.11	28.15	23.95
HNU-A0947	M	1998.04.06	Mt. Bawangling	35.12	12.02	11.98	5.85	19.05	15.77

30 *Chirixalus doriae* Boulenger, 1893

20 males and 6 females. Mt. Limu, Mt. Diaoluo, Mt. Wuzhi, and Niujiaoling, alt. 480~690 m.

31 *Philautus ocellatus* Liu and Hu, 1973

One specimen, HNU-A0636, male, Jun. 25, 1998, Mt. Jianfengling, alt. 580 m. SVL 17.46, HL 5.98, HW 5.78, LS 2.92, LT 11.18, LF 8.02.

32 *Polypedates megacephalus* Hallowell, 1861

18 males, 18 females and 3 subadults, Mt. Limu, Mt. Diaoluo, Mt. Wuzhi, Mt. Jianfengling, Wanling, and Haikou, alt. 20~710 m.

33 *Polypedates mutus* (Smith, 1940)

20 males and 3 females. Mt. Limu, Mt. Diaoluo, and Mt. Jianfengling, alt. 610~710 m.

34 *Rhacophorus hainanus* new species

18 males and 3 females. Mt. Diaoluo, Mt. Jianfengling, and Mt. Bawangling. Nominated by Wang, *et al.* in the same issue of this journal. Please see pp. 297~300 of this issue.

35 *Rhacophorus rhodopus* Liu and Hu, 1959

11 males and 1 female. Mt. Limu and Mt. Diaoluo, alt. 570~710 m.

References

- [1] Liu CC, SC Hu, L Fei, and CC Huang. On collections of amphibians from Hainan Island [J]. *Acta Zoologica Sinica*, 1973, 19 (4): 385~404.
- [2] Liu SL, LJ Wang, SQ Lü, H Zhao, J Che, GF Wu. A new species of the genus *Philautus* (Anura: Rhacophoridae) and winter herpetological exploration in Hainan Province, China [J]. *Sichuan J Zool*, 2004, 23 (3): 202~206 (Plate I).
- [3] Shi HT. Amphibian fauna and zoogeographic division of Hainan [J]. *Sichuan J Zool*, 2002, 21 (3): 174~176.
- [4] Shi HT, JL Meng, Y Xiong, ML Hong, LJ Wang, W Liang, and SL Liu. A Guide to Hainan Terrestrial Vertebrates [M]. Hainan Press, Haikou, viii + 320, 8 color plates, 2001.
- [5] Wang LJ, ML Hong, HT Shi. Endemic amphibians of Hainan Island [J]. *Chinese Wildlife*, 2004, 25 (4): 10~15.
- [6] Wang LJ, ML Hong, JC Wang, SQ Lu, HT Shi. Diversity and fauna analysis of amphibians in Limushan Nature Reserve of Hainan Province [J]. *Chinese J Zool*, 2004, 39 (6): 54~57.
- [7] Zhao EM. Herpetofauna and zoogeography of Hainan Island [A]. In Er-mi Zhao (ed.); *From Water onto Land* [C]. Beijing: China Forestry Press, 1990: 354~363.
- [8] Zhao EM and K Adler. *Herpetology of China* [M]. Published by SSAR & CSSAR, Oxford, Ohio, USA, 1993: 522, 48 color plates.