

**Appendix 4.** Time table of incubation and brooding on/off bouts for the male and female. Times in hr:min:sec.

Date	Incubation		Male	
	Female On egg	Off egg	On egg	Off egg
6/24/21	11:37:38	15:17:59	21:24:02	23:59:59
	16:40:56	21:24:02		
6/25/21	22:55:18	23:54:16	0:00:00	5:42:26
			17:45:55	22:55:18
			23:54:16	23:59:59
6/26/21	0:02:16	0:06:47	0:00:00	0:02:16
	0:08:42	1:45:31	0:06:47	0:08:42
	1:46:36	1:52:46	1:45:31	1:46:36
	1:54:40	2:10:57	1:52:46	1:54:40
	2:12:08	2:19:24	2:19:24	2:20:22
	2:20:22	2:26:41	19:46:15	20:51:36
	2:27:35	2:36:55	21:33:23	21:38:12
	2:38:29	5:11:05	21:41:32	21:42:06
	5:12:30	14:53:35	22:43:17	22:45:05
	18:37:06	19:46:15	22:51:51	22:53:59
	20:51:36	21:33:23	22:57:57	22:59:22
	21:38:12	21:41:32	23:02:30	23:05:26
	21:42:06	22:43:17	23:10:44	23:12:34
	22:45:05	22:51:51	23:25:45	23:27:21
	22:53:59	22:57:57	23:36:04	23:37:47
	22:59:22	23:02:30		
	23:05:26	23:10:44		
23:12:37	23:25:45			
23:27:21	23:36:04			
23:37:47	23:59:59			
6/27/21	0:00:00	1:12:55	1:12:55	1:18:02
	1:18:02	1:28:28	1:28:28	1:29:57
	1:29:57	3:06:20	3:06:20	3:10:22
	3:10:22	4:20:40	20:49:50	20:55:48
	4:22:05	9:10:56	21:32:23	21:34:46
	20:02:22	20:49:50	23:01:09	23:04:28
	20:55:48	21:32:23		
	21:34:46	23:01:09		
23:04:28	23:59:59			

6/28/21	0:00:00	0:44:04	0:44:04	1:50:42
	1:50:42	6:02:01	6:02:01	10:34:51
	20:58:10	23:30:20	23:30:20	23:34:47
	23:34:47	23:59:59		
6/29/21	0:00:00	1:26:52	1:26:52	1:32:56
	1:32:56	2:37:33	2:37:33	2:43:40
	2:43:40	4:13:03	4:13:03	4:14:53
	4:14:53	5:41:08	22:00:13	22:53:09
	5:41:50	15:11:06	23:48:05	23:58:59
	21:57:14	22:00:13		
	22:53:09	23:48:05		
	23:58:59	23:59:59		
6/30/21	0:00:00	0:18:55	0:18:55	0:28:03
	0:28:03	1:45:59	1:45:59	2:01:43
	2:01:43	2:50:14	2:50:14	2:56:26
	2:56:26	3:23:44	3:23:44	8:44:59
	20:58:51	22:24:48	20:38:01	20:58:51
	22:37:14	23:59:59	22:24:48	22:37:14
7/1/21	0:00:00	0:00:48	0:00:48	0:07:11
	0:07:11	1:44:45	1:44:45	1:49:45
	1:49:45	1:53:18	1:53:18	1:55:47
	1:55:47	2:05:15	2:05:15	2:18:48
	2:18:48	2:33:11	2:33:11	16:37:13
	20:53:57	20:57:05	18:28:26	20:53:57
	21:13:29	21:37:22	20:57:05	21:13:29
	21:52:08	22:09:01	21:37:22	21:52:08
	23:32:30	23:46:43	22:09:01	23:32:30
		23:46:43	23:59:59	
7/2/21	1:19:36	2:25:02	0:00:00	1:19:36
	2:30:14	20:54:11	2:25:02	2:30:14
	20:55:22	21:23:48	21:23:48	21:27:14
	21:27:14	21:43:56	21:43:56	22:03:29
	22:03:29	22:08:24	22:08:24	22:11:32
	22:11:32	22:20:12	22:20:12	22:24:10
	22:24:10	23:53:13	23:53:13	23:59:59
7/3/22	0:03:11	1:01:32	0:00:00	0:03:11
	1:15:25	2:27:14	1:01:32	1:15:25
	3:55:46	5:55:44	2:27:14	3:55:46
	20:05:01	23:31:25	5:55:44	17:18:36
			19:21:10	20:05:01
		23:31:25	23:59:59	

7/4/22	0:25:17	1:50:07	0:00:00	0:25:17
	1:54:48	3:01:20	1:50:07	1:54:48
	3:06:10	5:27:58	3:01:20	3:06:10
	5:28:51	20:39:05	21:02:18	21:20:20
	20:40:28	20:54:36	21:59:41	22:55:48
	20:55:26	20:57:43	23:13:09	23:21:29
	20:59:04	21:02:18	23:55:49	23:59:59
	21:20:20	21:59:41		
	22:55:48	23:13:09		
	23:21:29	23:55:49		
	7/5/21	20:55:09	21:55:42	0:00:00
22:35:34		23:28:10	5:35:19	17:17:56
			20:42:13	20:55:09
			21:55:42	22:35:34
			23:28:10	23:59:59
7/6/21	0:48:04	1:01:53	0:00:00	0:48:04
	1:08:04	1:16:40	1:01:53	1:08:04
	1:21:26	3:28:17	1:16:40	1:21:26
	3:34:20	3:39:04	3:28:17	3:34:20
	3:39:58	4:08:04	21:09:19	22:29:22
	4:10:58	21:09:19	22:58:10	23:05:16
	22:29:22	22:58:10	23:35:51	23:46:15
	23:05:16	23:35:51		
	23:46:15	23:59:59		
7/7/21	0:00:00	0:16:53	0:16:53	0:21:49
	0:21:49	0:26:41	0:26:41	0:34:57
	0:34:57	1:15:59	1:15:59	4:20:43
	20:49:36	23:24:50	4:21:28	20:22:56
	23:56:16	23:59:59	20:40:39	20:49:36
			23:24:50	23:56:16
7/8/21	0:00:00	1:02:16	1:02:16	1:09:17
	1:09:17	4:33:03	20:42:17	21:57:35
	4:34:54	20:42:17	22:14:25	22:19:41
	21:57:35	22:14:25	23:11:37	23:20:33
	22:19:41	23:11:37	23:57:50	23:59:59
	23:20:33	23:57:50		
7/9/21	1:33:01	1:37:57	0:00:00	1:33:01
	21:01:43	21:52:53	1:37:57	21:01:43
			21:52:53	23:59:59
7/10/21	0:40:09	1:35:44	0:00:00	0:40:09
	1:45:47	1:57:42	1:35:44	1:45:47
	2:13:31	3:46:47	1:57:42	2:13:31
	3:51:50	15:45:59	3:46:47	3:51:50
	22:17:42	22:31:09	15:45:59	22:17:42
			22:31:09	23:59:59

7/11/21	0:57:15	1:11:50	0:00:00	0:57:15
	1:19:56	1:26:04	1:11:50	1:19:56
	1:30:32	2:41:32	1:26:04	1:30:32
	2:51:24	4:03:53	2:41:32	2:51:24
	20:24:25	23:15:39	4:03:53	20:24:25
		23:15:39	23:59:59	
7/12/21	1:45:21	3:27:22	0:00:00	1:45:21
	3:43:43	20:26:10	3:27:22	3:43:43
	22:34:37	23:48:26	20:26:10	22:34:37
	23:50:47	23:59:59	23:48:26	23:50:47
7/13/21	0:00:00	2:11:43	2:15:12	2:18:01
	2:12:43	2:15:12	2:19:42	18:28:40
	2:18:01	2:19:42	19:17:59	19:32:14
	18:28:40	19:16:07	19:34:35	19:46:29
	19:32:14	19:34:35	19:49:21	19:57:52
	19:46:29	19:49:21	20:00:56	20:15:30
	19:57:52	20:00:56	20:17:10	20:28:19
	20:28:19	20:31:40		
	20:15:30	20:17:10	20:31:40	20:37:10
	20:37:10	20:40:49	20:40:49	23:19:12
	23:19:12	23:32:11	23:32:11	23:34:10
	23:34:10	23:59:59		
	7/14/21	0:00:00	2:06:04	2:06:04
2:07:37		2:24:13	2:24:13	2:25:35
2:25:35		4:22:20	23:03:18	23:08:06
4:23:15		4:34:18	23:12:52	23:16:32
4:36:17		5:46:32	23:26:44	23:30:18
5:47:13		13:16:11	23:35:20	23:44:19
19:56:10		21:24:10	23:55:57	23:59:46
21:25:23		22:03:42		
22:05:13		22:11:25		
22:12:42		22:33:27		
22:35:18		23:03:18		
23:08:06		23:12:52		
23:16:32		23:26:44		
23:30:18		23:35:20		
23:44:19		23:55:57		
23:59:46		23:59:59		
7/15/21		0:00:00	0:06:43	0:06:43
	2:54:40	3:02:29	3:02:29	3:06:32
	3:06:32	3:19:33	3:19:33	4:01:17
	4:01:17	4:14:36	4:14:36	20:31:28
	20:31:28	20:38:30	20:38:30	21:37:14
	21:37:14	21:51:50	21:51:50	22:02:12
	22:02:12	23:59:59		

7/16/21	0:00:00	0:01:18	0:01:18	0:52:20	
	0:52:20	2:36:20	2:36:20	2:43:09	
	2:43:09	3:55:45	3:55:45	4:08:10	
	4:08:10	20:50:39	20:50:39	20:55:44	
	20:55:44	21:05:38	21:05:38	21:24:24	
	21:24:24	21:27:04	21:27:04	21:48:09	
	21:48:09	21:59:11	21:59:11	23:13:09	
	23:13:09	23:45:35	23:45:35	23:59:59	
	7/17/21	3:00:45	3:03:28	0:00:00	3:00:45
		3:29:33	4:15:19	3:03:28	3:29:33
20:18:55		20:57:05	4:15:19	5:39:49	
21:40:19		23:31:10	5:40:55	20:18:55	
			20:57:05	21:40:19	
7/18/21			23:31:10	23:59:59	
	0:58:07	1:53:18	0:00:00	0:58:07	
	3:14:37	17:04:19	1:53:18	3:14:37	
	20:49:03	22:02:02	17:04:19	20:49:03	
	22:21:11	22:58:23	22:02:02	22:21:11	
7/19/21	23:53:34	23:59:59	22:58:23	23:53:34	
	0:00:00	0:55:07	0:55:07	1:02:58	
	1:02:58	1:08:30	1:08:30	1:12:35	
	1:12:35	1:24:29	1:24:29	1:28:11	
	1:28:11	2:28:06	2:28:06	13:32:33	
7/20/21	13:32:33	20:46:35	20:47:46	21:44:54	
	21:44:54	23:14:42	23:14:42	23:25:34	
	23:25:34	23:59:59			
	0:00:00	1:46:47	1:56:16	2:00:18	
	1:47:28	1:51:03	3:18:30	4:58:49	
	1:51:45	1:56:16	14:17:05	21:29:17	
	2:00:18	3:18:30	21:47:08	22:32:20	
7/21/21	4:58:49	14:17:05			
	21:29:17	21:47:08			
	22:32:20	23:59:59			
	0:00:00	0:11:48	0:11:48	1:09:12	
	1:09:12	2:18:43	2:18:43	2:36:30	
Hatching at ~20:00 hr	2:36:30	3:36:04	3:36:04	3:44:25	
	3:44:25	4:20:20	13:27:07	20:28:26	
	4:21:48	4:27:34			
	4:28:37	13:27:07			

Date	Brooding			
	Female		Male	
	On nestling	Off nestling	On nestling	Off nestling
7/21/21	22:28:14	23:59:59	20:28:26	22:28:14
7/22/21	0:00:00	0:21:02	0:21:02	1:49:34
	1:49:34	3:23:23	3:23:23	3:54:33
	3:54:33	10:25:25	19:42:37	23:59:59
	10:35:55	16:20:50		
	18:16:47	19:42:37		
7/23/21	2:32:04	3:16:05	0:00:00	2:32:04
	19:37:27	23:59:59	3:16:05	19:37:27
7/24/21	0:00:00	16:15:49	18:53:21	20:45:56
	17:18:19	18:53:21	21:09:18	22:17:04
	20:45:56	21:09:18		
	22:17:04	23:59:59		
7/25/22	0:00:00	0:07:40	0:07:40	15:52:35
	20:37:11	23:59:59	17:18:04	20:37:11
7/26/21	0:00:00	15:59:59	16:11:52	20:35:25
	20:35:25	22:46:40	22:46:40	22:49:59
	22:49:59	23:59:59		
7/27/21	0:00:00	0:41:14	0:41:14	5:48:07
	20:01:43	23:59:59	5:50:52	15:17:32
			17:06:59	20:01:43
7/28/21	0:00:00	0:09:19	0:09:19	2:10:47
	2:10:47	14:31:59	14:31:59	20:45:28
	20:45:28	23:59:59		
7/29/21	0:00:00	1:52:19	1:52:19	2:55:36
	2:55:36	9:41:28	14:17:26	21:51:19
	12:02:20	14:17:26	22:10:34	23:59:59
	21:51:19	22:10:34		
7/30/21	0:34:19	1:33:14	0:00:00	0:34:19
	1:38:50	3:29:16	1:33:14	1:38:50
	20:56:54	23:59:59	3:29:16	11:11:13
			12:20:50	16:10:26
			17:04:38	20:56:54
7/31/21	0:00:00	1:02:02	1:02:02	1:06:33
	1:06:33	10:53:48	18:58:40	21:02:15
	12:24:20	16:23:07	21:09:29	22:46:08
	21:02:15	21:09:29		
	22:46:08	23:59:59		

8/1/21	0:00:00	2:42:11	2:42:11	8:58:09
	20:09:00	22:59:24	11:32:13	15:58:44
8/2/21			18:56:43	20:09:00
			22:59:24	23:59:59
	2:10:46	6:09:30	0:00:00	2:10:46
	6:10:42	15:08:15	18:50:23	20:22:59
	17:56:15	18:50:23	20:58:23	23:01:26
8/3/21	20:22:59	20:58:23		
	23:01:26	23:59:59		
	0:00:00	3:41:55	3:41:55	3:45:00
	3:45:00	4:16:08	4:16:08	10:00:54
	20:21:09	20:53:17	12:22:34	14:56:01
8/4/21	22:36:55	23:59:59	19:06:56	19:48:35
			20:53:17	22:36:55
	0:00:00	15:43:45	15:43:45	21:06:22
	21:06:22	22:41:29	22:41:29	23:59:59
	8/5/21	0:43:36	6:06:50	0:00:00
6:14:28		6:26:17	16:10:37	16:26:06
20:01:11		20:23:28	20:23:28	23:44:43
23:44:43		23:59:59		