

ハブ属 3種の孵化後の成長記録 I

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Growth of Three Species of *Trimeresurus*, Hatched and Reared in the Division of Venomous Snakes I

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I はじめに

ハブ支所において、孵化し、現在飼育中（一部は死亡）である、ハブ(*Trimeresurus flavoviridis*)、サキシマハブ(*T. elegans*)、ヒメハブ(*T. okinavensis*)の成長記録を掲載する。

なお、1972年に孵化したハブについては、香村・島村(1980)¹⁾にあるため省いた。今回の資料の一部は、香村・具志堅(1972 a, b)²⁻³⁾と重複する。飼育は香村が担当し、記録の整理は西村が行なった。

II 材料・方法

1 材料

産卵雌の採集地は、ハブは浦添市・西原町・那覇市・豊見城村を中心とした沖縄島中南部、サキシマハブはおそらく石垣島、ヒメハブはおそらく沖縄島北部である。

2 飼育方法

孵化後、放飼場に放したものの以外は、各個体は、個別のケージに入れ、室温で飼育した。ケージ内には水を入れたシャーレを置き、月に1～5回の給餌を行なった。餌としては、通常は、孵化後～半年、1年の間はマウスの足を、一部は半強制的に与え、その後半年～2年はマウスの幼体を、その後はマウス成体（大部分は死体）を与えた。一部（表1、表2）の個体には、摂食量以上の餌を与え、うち一部（表1）については、摂食量を記録した。その際、マウス成体の一部とマウス幼体については、個々の重量を測定したが、餌の大部分をしめる令のそろったマウス成体は、計測の結果、体重が約25gであったため、匹数のみを記録した。また、マウスの足は、前足が0.376g (s=0.091, n=20)、後足は0.621g (s=0.088, n=20)であり、1つあたりの重量としては、その平均の0.5

gを採用した。

3 測定法

死亡後の測定以外は、ヘビは、引っぱりすぎない程度に2人で体をのばし、全長（一部は尾長も）を測定し、上皿天秤または台ばかりで体重を測定した。一部の個体については、測定は孵化後1ヶ月おきに行い、脱皮の期日も記録した。

性の判別は、測定時にペニスを出した個体と、死亡後剖検した個体以外については、尾の長さ・総排出腔付近の形態から判断したため“?”を付した。

III 結果

結果を表1～3に示す。

IV 文献

- 1) 香村昂男・島村賢正. “ハブ(*Trimeresurus flavoviridis*)の実験室内飼育（第二報）—7年間の飼育状況について—”. 沖縄県公害衛生研究所報, 14: 59-73, (1980).
- 2) ———・具志堅清徳. “ヒメハブ幼蛇の飼育について”. *Snake*, 4: 118-119, (1972 a).
- 3) ———・———. “ハブ及びヒメハブ幼蛇の実験室内における飼育（予報）”. 沖縄県公害衛生研究所報, 6: 229-235, (1972 b).

表1-1 ヒメハブの成長記録 1972年8月11日に、1雌が産んだ6卵を約32℃で保存し、孵化した6個体(A~F)を個別に飼育した。測定結果等は2ヶ月ごとにまとめた。

○:孵化日; Ta:尾長(cm); TL:全長(cm); BW:体重(g)……前記3測定値中、下線を引いたものは、前後2月の平均値; FC:摂食量(g)……カッコ内の値は、半強制給餌を含む; FF:摂食頻度=摂食のあった回数/給餌回数(半強制給餌は含まない); Sh:脱皮日。FC、FF、Shは、前回の測定後2ヶ月間のもの。

Table 1-1. Growth, feeding and shedding in captive *T. okinavensis*. 6 eggs were laid by the same female on August 11 1972, and kept at 32°C. 6 hatchlings were named as A-F, and reared in separated cages at room temperatures. A meal was a foot of a mouse (sometimes fed by force) and baby mice at first, and later 2 or 3 mice. Unconsumed food was removed the next day and food consumption was recorded. The snakes were measured monthly and dates of shedding were recorded. The sex was ascertained by finding hemipenes while measuring or by dissection after death, and in other individuals only by the impression of the author (added "?").

○: date of hatching; Ta: tail length (cm); TL: total length (cm); BW: body weight (g)……these values underlined are the means of those measured in the adjacent 2 months; FC: food consumption (g), values in parentheses include mouse feet fed by force; FF: frequency of feeding, consumed meals/offered meals; Sh: date of shedding. FC, FF and Sh indicate the occurrences since preceding measurement.

	A						B (♂?)						C (♂?)					
	Ta	TL	BW	FC	FF	Sh	Ta	TL	BW	FC	FF	Sh	Ta	TL	BW	FC	FF	Sh
○1972 Aug. 14		19	8.7				18	7.7					18	7.7				
Oct. 12		22	9.8 (2)			Aug. 24	22	9.0 (2.5)			Aug. 24	24	10.5	3	6/8		Aug. 25	
Dec. 12		24	12.5 (4)				24	11.5 (4)				27.5	18.5	4	8/8			
1973 Feb. 18		25	16.0 (5)				25	14.0 (5)				29	22.0	10	4/8			
Apr. 14		*27.5	22.0 (5.5)			Mar. 2	26.5	16.0 (3.5)			Apr. 2	30	25.0	9	3/5		Mar. 15	
Jun. 17		**30	29.5 (3)			May 28	30	22.0 (17)	3/3		May 16	35	33.0	18	4/5		Jun. 5	
Aug. 14		34	35.0 (4)			Aug. 7	36	33	35.5	6/6	Jul. 8	40	53	35.5	6/6			
Oct. 14		35	45.0	8.5	2/4		41	55	46	6/6	Sep. 16	43	65	46	6/6		Aug. 28	
Dec. 14		36	36.0	0	0/6		45	71.2	59	6/6		46	90.5	59	6/6			
1974 Feb. 15		36	36.0 (0.5)	0/4			45	75	80	4/6		47	120	125	6/6			
Apr. 14		36	35	0	0/4	Apr. 5	46	90	60	3/6	Apr. 1	47	103	40	2/6		Mar. 30	
Jun. 14		38	50	33.5	5/5	May 24	51.5	120	80	4/6	May 28	52	145	110	5/6		May 14	
Aug. 14		44	105	120	7/7	Aug. 4	55	155	120	6/6		56	170	80	4/6			
Oct. 14	7.8	48	155	200	6/6	Sep. 21	10.4	56	150	40	2/5	Sep. 10	10.4	56	155	0	0/5	Sep. 15
Dec. 14	8.6	55	250	255	6/6		11	58	170	65	3/7		10.6	57	170	105	4/7	
1975 Feb. 13	8.6	55	320	275	6/6		11	58	175	50	2/6		10.6	57	175	75	2/6	
Apr. 14	8.6	55	300	160	4/6		11	58	150	25	1/6		10.6	57	165	25	1/6	
Jun. 14	10.1	60	390	245	6/7	Apr. 19 Jun. 4	11.1	58.5	160	45	2/7		10.8	58	160	50	2/7	May 9
Aug. 14	11	64	490	300	6/6	Aug. 11	11.1	59	200	150	6/6		10.8	58	205	150	6/6	
Oct. 14	11	68	575	400	6/6	Oct. 11	11.6	60	220	75	3/6	Sep. 21	11	60	200	25	1/6	Sep. 25
Dec. 14	11	70	735	400	6/6		11.9	61	170	25	1/6	Oct. 30	11	60	165	0	0/6	
1976 Feb. 14	11	70	700	125	3/6		11.9	61	160	25	1/6		11	60	170	50	2/6	
Apr. 14	11	70	815	300	5/6		11.9	61	175	75	3/6		11	60	175	25	1/6	
Jun. 14	11.5	72	830	275	5/6	May 5	11.9	61	180	50	2/6	May 5	11	60	180	50	2/6	May 5
Aug. 14	12.2	77	1030	450	6/6	Jul. 3	11.9	61	170	0	0/6		11	60	220	150	4/6	

	A						B (♂?)						C (♂?)					
	Ta	TL	BW	FC	FF	Sh	Ta	TL	BW	FC	FF	Sh	Ta	TL	BW	FC	FF	Sh
1977 Oct. 14	12.2	77	990	275	4/6	Oct. 1	11.9	61	190	50	2/6	Sep. 17	11.2	62	215	25	1/6	Sep. 13
Dec. 14	12.2	78	1020	250	4/4		11.9	61	200	50	2/5		11.2	62	205	50	2/5	
Feb. 14	12.2	78	1035	130	3/4		11.9	61	165	0	0/4		11.2	62	210	130	3/4	
Apr. 14	12.2	78	1090	30	1/4		11.9	61	165	0	0/4		11.2	62	185	50	1/4	
Jun. 14	13	80	1090	75	2/4	May 10	11.9	61	180	50	2/4	May 2	11.2	62	240	100	2/4	May 6
Aug. 13	13	80	1010	100	2/4	Aug. 3	11.9	61	170	0	0/4		11.2	62	240	50	1/4	
Oct. 14	13	80	1100	150	3/4		11.9	61	170	25	1/4	Sep. 14	11.5	63	230	0	0/4	Sep. 8
Dec. 14	13	80	1090	100	3/4		11.9	61	170	75	3/4		11.5	63	210	25	1/4	
1978 Feb. 14	13	80	1040	100	3/4		11.9	61	170	50	2/4		11.5	63	220	100	4/4	
Apr. 14	13	80	1070	100	3/4		11.9	61	190	125	4/4		11.5	63	210	100	3/4	
Jun. 14	13	82	1140	100	2/3	May 20	12	62	190	25	1/3	May 11	12	64	240	75	3/3	May 11
Aug. 14	13	82	1190	200	4/4	Aug. 8	12	62	230	75	2/4		12	64	260	75	3/4	
Oct. 14	14	84	1140	150	3/4		12	64	240	175	4/4	Sep. 12	12	65	280	150	3/4	Sep. 7
Dec. 14	14	84	1160	175	3/4		12	64	230	25	1/4		12	65	250	0	0/4	
1979 Feb. 14	14	84	1160	150	3/4		12	64	220	50	1/4		12	65	240	25	1/4	
Apr. 14	14	84	1200	100	2/4		12	64	220	50	2/4		12	65	230	50	1/4	
Jun. 13	14	85	1280	150	3/4	May 10	12	65	210	25	1/4	May 10	12	66	255	75	3/4	May 20
Aug. 13	14	85	1180	200	4/4	Jul. 30	12	65	230	100	2/4		12	66	320	125	3/4	
Oct. 13	14	85	1350	175	3/3		12	65	220	25	1/3	Sep. 14	12	66	295	50	2/3	Sep. 14
Dec. 14	14	85	1300	175	3/4	Oct. 22	12	65	235	50	2/4		12	66	280	25	1/4	
1980 Feb. 14	14	85	1330	175	4/4		12	65	200	25	1/4		12	66	260	25	1/4	
Apr. 14	14	88	1400	125	3/3		12	65	225	125	3/4		12	66	285	100	4/4	
Jun. 14	14	88	1520	150	3/3		12	65	280	50	2/3	May 14	12	66	320	125	3/3	May 14
Aug. 14	14	88	1480	125	3/3	Jun. 22	12	65	280	150	4/4		12	66	350	175	4/4	
Oct. 14	14	88	1500	250	4/4	Sep. 18	12	65	275	75	3/4	Sep. 13	13	67	320	0	0/4	Sep. 22
Dec. 13	14	88	1420	225	4/4		12	65	270	50	2/4		13	67	330	75	3/4	
1981 Feb. 13	14	88	1370	200	4/4		12	65	260	25	1/4		13	67	315	50	1/4	
Apr. 14	14	88	1410	250	4/4		12	65	260	0	0/4		13	67	310	25	1/4	
Jun. 13	14	88	1560	270	4/4	Apr. 27	12.5	66	270	100	3/4	May 11	13	68	350	125	3/4	May 12
Aug. 13	14	88	1730	300	4/4		12.5	66	340	100	4/4		13	68	385	175	4/4	
Oct. 14	14	88	1570	210	4/4	Aug. 18	12.5	66	300	105	3/4	Sep. 22	13	68	400	80	2/4	Sep. 21
Dec. 14	14	88	1610	300	4/4		12.5	66	290	0	0/4		13	68	400	75	2/4	
1982 Feb. 13	14	88	1590	300	4/4		12.5	66	300	25	1/4		13	68	420	75	3/4	
Apr. 14	14	88	1650	125	2/4		12.5	66	290	25	1/4		13	68	410	50	1/4	
Jun. 14	14	88	1570	0	0/4	Apr. 21	12.5	66	290	50	1/4	Apr. 21	13	70	420	100	3/4	Apr. 30
Aug. 13	14	88	1500	25	1/4	Jul. 12	12.5	66	300	100	2/4		13	70	500	150	3/4	
Oct. 14	14	88	1510	80	3/4		12.7	67	280	0	0/4	Sep. 14	13	71	420	100	2/4	Sep. 6
Dec. 14	14	88	1550	215	4/4		12.7	67	300	80	2/4		13	71	440	30	1/4	
1983 Feb. 13	14	88	1500	80	2/4		12.7	67	310	50	2/4		13	71	440	75	2/4	
Apr. 14	14	88	1480	30	1/4		12.7	67	290	25	1/4		13	71	440	75	2/4	
Jun. 14	14	88	1470	0	0/4		12.7	67	280	50	2/4	Apr. 25	13	72	460	100	3/4	May 9
Aug. 15	(died on Jul. 25)					Jul. 5	12.7	67	300	25	1/4		13	72	550	175	4/4	

* 1973年4月17日に測定。 ** 1973年6月19日に測定。

* measured on April 17 1973. ** measured on June 19 1973.

表1-2 (表1-1のつづき)

Table 1-2. The other 3 individuals of *T. okinavensis*. Rearing conditions and symbols are same as in Table 1-1.

	D						F						F					
	Ta	TL	BW	FC	FF	Sh	Ta	TL	BW	FC	FF	Sh	Ta	TL	BW	FC	FF	Sh
○ 1972 Aug. 14		19	8.9				19	8.2					18	7.6				
Oct. 13		24	14.5	12	7/7	Aug. 24	24	11.5	7	6/7	Aug. 24	24	11.0	3.5	7/8	Aug. 24		
Dec. 12		27	21.5	12.5	7/7		27.5	16.5	3.5	7/8		27	18.5	4	8/8			
1973 Feb. 18		29	25.0	9	2/11		29	29.5	14.5	5/8		29	24.0	7	6/10			
Apr. 14		31	28.2	10	2/5	Mar. 2	31	30.0	13.5	3/5	Mar. 3	30	23.2	1	2/9	Mar. 2		
Jun. 17		35	41.0	23.5	5/5	May 11	36	40.0	23.5	5/5	May. 4	34	29.0	3	6/6	May 10		
Aug. 14		41	58	35.5	6/6	Jul. 17	41	53	35.5	6/6		38	38	20.5	6/6			
Oct. 14		44	87	46	6/6	Sep. 26	44	77	46	6/6	Sep. 16	42	67.5	46	6/6			
Dec. 14		48	115	59	6/6		47	100	59	6/6		45	84.5	59	6/6			
1974 Feb. 15		48	150	130	6/6		47	105	80	4/6		46	94	85	4/6			
Apr. 14		51	180	120	6/6	Mar. 26	49	110	40	2/6	Mar. 30	47	95	60	3/6	Apr. 5		
Jun. 14		57	250	120	6/6	Jun. 12	53	160	120	6/6		51.5	120	60	3/6			
Aug. 14		62	350	150	6/6		56	185	100	5/6	Jul. 21	53	150	80	4/6			
Oct. 14	10.9	67	425	270	6/6	Sep. 15	10.6	56	160	20	1/5	Sep. 17	10	53	120	20	1/6	Aug. 28
Dec. 14	11.3	68	630	440	6/6		11	58	175	85	4/7		10.3	54	120	0	0/7	
1975 Feb. 13	11.5	70	785	150	6/6		11	58	205	125	5/6		10.3	55	155	100	4/6	
Apr. 14	11.5	70	745	225	6/6		11	58	210	100	4/6		10.3	55	155	100	4/6	
Jun. 14	12.3	73	745	250	4/7	May 13	11.3	59	220	75	3/7	May. 10	10.9	56	150	50	2/7	May. 5
Aug. 14	12.7	75	820	450	6/6	Aug. 2	11.4	60.5	280	150	6/6		10.9	56	200	100	4/6	
Oct. 14	13	77	1000	450	6/6		11.6	62	250	75	3/6	Sep. 25	11.6	59	170	50	2/6	Sep. 25
Dec. 14	13	77	1020	450	6/6	Oct. 20	11.6	62	250	50	2/6		11.6	61	180	25	1/6	
1976 Feb. 14	13	77	1000	225	5/6		11.6	62	235	50	2/6		11.6	61	155	25	1/6	
Apr. 14	13.5	80	1180	225	5/6		11.6	62	255	75	3/6		11.6	61	155	0	0/6	
Jun. 14	13.5	80	1050	25	1/6	Jun. 5	11.6	62	230	0	0/6	May. 11	11.6	61	145	0	0/6	May 5
Aug. 14	13.5	80	1115	200	5/6		11.6	63	275	100	3/6		11.6	61	140	0	0/6	
Oct. 14	(died on Aug. 18)						11.6	63	260	75	2/6	Sep. 17	11.6	61	135	0	0/6	
Dec. 14							11.6	64	270	100	2/5		11.6	61	110	0	0/5	Oct. 14
1977 Feb. 14							11.6	64	280	105	3/4		11.6	61	180	135	4/4	
Apr. 14							11.6	64	280	55	2/4		11.6	61	155	30	1/4	
Jun. 14							11.6	64	280	25	1/4	May. 6	11.6	61	145	0	0/4	May 2
Aug. 13							11.6	64	330	125	3/4		11.6	61	140	0	0/4	
Oct. 14							12	65	380	130	4/4	Sep. 16	11.6	61	130	0	0/4	
Dec. 14							12	65	330	125	4/4		11.6	61	110	0	0/4	Oct. 14
1978 Feb. 14							12	65	350	150	4/4		11.6	61	160	175	4/4	
Apr. 14							12	65	375	200	4/4		11.6	61	180	175	4/4	
Jun. 14							12	66	390	25	1/3	May. 9	11.6	61	190	50	2/3	May 10
Aug. 14							12	66	460	125	3/4		11.6	61	230	125	4/4	
Oct. 14							12.4	68	480	175	4/4	Sep. 20	11.6	62	235	75	2/3	Sep. 20
Dec. 14							12.4	68	450	200	4/4		11.6	62	230	75	2/4	
1979 Feb. 14							12.4	68	480	125	3/4		11.6	62	225	50	2/4	
Apr. 14							12.4	68		125	4/4		11.6	62	225	50	2/4	

	D						E						F						
	Ta	TL	BW	FC	FF	Sh	Ta	TL	BW	FC	FF	Sh	Ta	TL	BW	FC	FF	Sh	
1979 Jun. 13							(died on Apr. 14)						12	63	220	50	2/4	May	2
Aug. 13													12	63	240	50	1/4		
Oct. 13													12	63	210	0	0/3	Sep.	14
Dec. 14													12	63	215	50	1/4	Nov.	1
1980 Feb. 14													12	63	210	50	1/4		
Apr. 14													12	63	215	75	3/4		
Jun. 14													12	63	260	125	3/3	May	14
Aug. 14													12	63	300	175	4/4		
Oct. 14													12	64	280	50	1/4	Sep.	17
Dec. 13													12	64	250	0	0/4		
1981 Feb. 13													12	64	235	25	1/4		
Apr. 14													12	64	255	75	2/4		
Jun. 13													12	64	270	125	3/4	May	11
Aug. 13													12	64	340	200	4/4		
Oct. 14													12	64	310	50	1/4	Sep.	21
Dec. 14													12	64	270	0	0/4		
1982 Feb. 13													12	64	250	0	0/4		
Apr. 14													12	64	260	25	1/4		
Jun. 14													12	65	290	150	4/4	May	14
Aug. 13													12	65	340	200	4/4		
Oct. 14													12.2	67	340	25	1/4	Sep.	20
Dec. 14													12.2	67	300	0	0/4		
1983 Feb. 13													12.2	67	275	0	0/4		
Apr. 14													12.2	67	310	55	2/4		
Jun. 14													13	68	330	125	3/4	May	6
Aug. 15													13	68	380	125	3/4		

表1-3 サキシマハブの成長記録 1雌が、1972年7月11日に産卵した13卵を平均30.1℃ (26-33℃) で保存。孵化した5個体中3個体は飼育初期に死亡した。記号等は、表1-1と同じ。

Table 1-3. Growth, feeding and shedding in *T. elegans*. A female laid 13 eggs on July 11 1972. The eggs were kept at 26-33°C (av=30.1, s=1.68, n=38), and 5 hatchlings were got. Two of them (C,D) lived long. Rearing conditions and symbols are same as in Table 1-1.

	C (♂)					D (♂?)						
	Ta	TL	BW	FC	FF	Sh	Ta	TL	BW	FC	FF	Sh
○1972 Aug. 20		21	3.7					21	3.5			
Oct. 20		22	3.9	(2.5)		Aug. 28		22	3.9	(2.5)		Sep. 1
Dec. 22		23	4.5	(4.5)				23	4.6	(5)		
1973 Feb. 18		24	5.5	(3.5)				24	5.7	(3.5)		
Apr. 21		26	6.2	(4.5)		Mar. 31		26	6.2	(4)		Mar. 31
Jun. 25		28	8.0	(4.5)				28	8.0	(4.5)		Jun. 4
Aug. 19		30	9.0	(6)		Aug. 3		30	8.5	(5.5)		Jul. 27
Oct. 22		36	15.0	20	6/6	Sep. 29		32	11.0	14	4/6	
Dec. 21		39	22.5	27	7/8			33	10	3	1/6	
1974 Feb. 21		40	25.0	7	2/5			33	10	0	0/4	
Apr. 22		44	36	15	3/3			33	11	5	2/4	
Jun. 21		51	42.7	41.5	6/7	Apr. 27 Jun. 13		35	13.0	12.5	4/4	
Aug. 20		63	75	128	7/7	Jul. 22		37	14.9	15	4/7	
Oct. 20	11.5	71	100	140	6/7	Sep. 20	5	39	20.1	20	6/7	Sep. 29
Dec. 21	12	72	120	100	4/7		6	43	27	17	4/7	
1975 Feb. 22	12	72	120	0	0/4		6	43	26	0	0/4	
Apr. 21	12	72	125	20	1/4		6	43	31.5	10	2/4	
Jun. 20	12.3	75	140	90	4/7	May 6	6.7	47.5	40	27	4/7	May 4
Aug. 21	13.5	78	160	195	7/7	Jun. 29	7	52	50	47	5/7	
Oct. 21	14.4	83	220	250	6/6	Sep. 20	7.6	58	55	62	7/8	Sep. 22
Dec. 22	14.4	83	215	75	2/6		8.5	62	80	98	7/7	
1976 Feb. 20	14.4	83	210	0	0/6		8.5	62	85	55	3/6	
Apr. 21	14.4	83	210	0	0/6		9	65	95	35	2/6	
Jun. 21	14.4	85	225	125	3/6	May 11	10	70	130	110	5/6	Apr. 21 May 29
Aug. 20	14.4	87	280	300	6/6	Jul. 3	10	76	160	110	5/6	Jul. 12
Dct. 21	15	90	260	50	2/6	Sep. 30	10.5	80	190	175	4/6	Sep. 22
Dec. 21	15	90	250	0	0/6		10.5	80	180	0	0/6	
1977 Feb. 21	15	90	240	0	0/5		10.5	80	180	0	0/5	
Apr. 21	15	90	240	0	0/5		10.5	80	170	0	0/5	
Jun. 21	15	90	290	150	3/4	May. 6	11	82	190	75	2/4	Apr. 23 Jun. 13
Aug. 22	15	92	310	140	3/4		12	84	230	160	4/4	
Oct. 21	15	94	335	150	3/4	Sep. 16	12	87	250	105	3/4	Sep. 16
Dec. 21	15	94	320	25	1/4		12	87	220	0	0/4	
1978 Feb. 22	15	94	310	0	0/4		12	87	220	0	0/4	
Apr. 21	15	94	305	0	0/3		12	90	210	0	0/3	
Jun. 21	15	94	315	75	1/4	May 10	12	90	250	125	3/4	May 6
Aug. 21	15	96	365	225	4/4	Jun. 7	12	90	285	175	3/4	Jun. 27
Oct. 21	16	100	360	150	3/3	Sep. 21	12.3	92	280	100	2/3	Sep. 16
Dec. 21	16	100	380	75	2/4		12.3	92	280	50	1/4	

	C (⌘)						D (⌘ ?)					
	Ta	TL	BW	FC	FF	Sh	Ta	TL	BW	FC	FF	Sh
1979 Feb. 21	16	100	370	0	0/4		12.3	92	270	0	0/4	
Apr. 20	16	100	350	0	0/4		12.3	92	260	0	0/4	
Jun. 21	16	100	390	125	2/4	May 7	13	95	270	125	3/4	May 2 Jun. 17
Aug. 24	16	100	400	225	3/4	Jul. 6	13	95	290	225	4/4	
Oct. 19	16	100	380	150	2/2	Sep. 17	13	95	270	0	0/2	Sep. 3
Dec. 21	16	100	410	110	3/4		13	95	280	50	2/4	Oct. 23
1980 Feb. 21	16	100	410	25	1/4		13	95	260	0	0/3	
Apr. 21	16	100	390	0	0/4		13	95	255	0	0/4	Apr. 18
Jun. 20	16	100	380	75	2/4	May 6 Jun. 11	13	95	270	75	2/4	Jun. 10
Aug. 21	16	100	420	300	4/4		13	95	300	200	3/4	
Oct. 20	16	100	410	150	3/4	Sep. 24	13	96	300	125	3/4	Sep. 16
Dec. 19	16	100	460	175	3/4		13	96	310	75	1/4	
1981 Feb. 21	16	100	440	0	0/4		13	96	300	0	0/4	
Apr. 20	16	100	425	0	0/2	Apr. 7	13	98	290	0	0/4	Apr. 20
Jun. 21	16	102	450	125	2/4	May 29	13	98	290	100	2/4	Jun. 16
Aug. 21	16	102	500	275	4/4		13	98	310	75	3/4	
Oct. 20	16	102	510	150	3/4	Sep. 16	13	98	310	60	2/3	Aug. 27
Dec. 21	16	102	500	30	1/4		13	98	300	30	1/4	
1982 Feb. 22	16	102	500	0	0/4		13	98	300	0	0/4	
Apr. 21	16	102	490	0	0/4		13	98	290	0	0/4	
Jun. 21	16	103	490	55	2/3	Apr. 22	13	98	280	0	0/3	Apr. 22
Aug. 21	16	103	530	350	5/5	Jun. 21	13	98	330	275	5/5	Jun. 22
Oct. 21	16	104	530	30	1/3	Sep. 16	13	98	360	85	2/3	Sep. 27
Dec. 21	16	104	540	55	2/4		13	98	360	80	2/4	
1983 Feb. 21	16	104	530	0	0/4		13	98	350	0	0/4	
Apr. 22	16	105	530	0	0/4		13	98	350	0	0/4	Apr. 22
Jun. 21	16	106.5	510	50	2/3	Apr. 26 Jun. 13	13	100	350	25	1/3	Jun. 13
	16	106.5	580	250	4/4		13	100	360	125	4/4	

表2. ハブとヒメハブの成長記録 記号等は、表1-1と同じ。

Table 2. Growth and shedding in captive *Trimeresurus* hatched in 1970. Rearing conditions and symbols are same as in Table 1-1.

	<i>T. okinavensis</i>			<i>T. flavoviridis</i>										
	No. 18 (♀?)	TL	BW	Sh	No. 5 (♂)			No. 6 (♂)			No. 6A			
					TL	BW	Sh	TL	BW	Sh	TL	BW	Sh	
1970														
○ Sep. 10	34	10.0			○ Aug. 1	19	5.5		18	6.0		18	5.0	
Nov. 6	37	9.0	Sh	19	Oct. 3	20	6.3	Aug.	20	6.6	Aug.	19	5.6	Aug.
					Dec. 9	21	6.8		21	6.9		19	6.0	
1971 Jan. 12	38	9.8			Feb. 12	21	7.7		21	7.0		<u>19.5</u>	<u>7.1</u>	
Mar. 5	38	9.9			Apr. 10	22	7.9		21	7.0	Apr. 6	20	7.5	
May 7	38	10.0			Jun. 8	24	12.0	Apr. 16	23	10.5		22	12.3	Apr. 16
Jul. 7	42	15.5	May 31		Aug. 3	26	15.2		25	13.0		25	14.5	
Sep. 3	49	21.5	Jul. 9		Oct. 1	<u>30.5</u>	<u>23.9</u>		29	21.0		29	26.9	Aug. 23
Nov. 2	57	31.1	Aug. 29		Dec. 4	33.5	33.4		31	21.4		31.5	32.2	
1972 Jan. 5	57	30.0			Feb. 5	34.0	36.5		31.5	20.0		32	36.0	
Mar.	<u>57</u>	<u>32.5</u>			Mar. 30	34.0	36.5		31.5	21.5		32	36.0	
Apr. 27	58	35.0			May 29	37	45	May 1	33	27.0	Apr. 22	36	50.0	Apr. 28
Jun. 30	67	50.0	May 14		Jul. 31	42	70		34.5	33.8		42	73	
Aug. 30	80	85.0	Jul. 20		Sep. 28	48	100		38	40.0	Aug. 9	48	120	
Oct. 27	90	110.0	Sep. 25		Nov. 30	48	128	Oct. 5	40	54.0	Oct. 16	52	180	Oct. 2
Dec. 28	93	170												
1973 Feb. 28	95	170			Jan. 31	49	128		40	60.0		54	220	Jan. 31
Apr. 30	96	170	Apr. 23		Mar. 31	50	140		41	57.0		56	240	
Jul. 2	104	200	Jun. 18		May 31	50	130	Apr. 27	41	53	Apr. 27	58	290	May 14
Aug. 31	110	230			Jul. 31	53	140		45	70		61	380	
Oct. 30	120	310	Sep. 26		Sep. 28	53	150		46	70	Sep. 24	66	520	Sep. 8
Dec. 30	120	340			Nov. 30	55	160	Sep. 28	48	100		67	540	
1974 Feb. 28	120	340			Jan. 30	55	170		49	90		69	550	
Apr. 30	120	380			Mar. 30	55	170		49	90		70	670	
Jun. 30	120	380	May 8		May 31	56	190	May 1	50	115	Apr. 14	73	820	
Aug. 30	125	420	Jul. 6		Jul. 30	56	200		52	150		73	840	Jun. 5
Oct. 31	130	440	Oct. 7		Sep. 30	56	180	Sep. 20	52	130	Aug. 31	73	840	Sep. 7
Dec. 30	130	510			Nov. 30	56	160		53	170		75	950	
1975 Feb. 28	130	495			Jan. 29	56	170		53	145		77	950	
Apr. 30	130	495			Mar. 31	56	200		53	140		77	990	
Jun. 30	130	480	May 28		May 31	56	185	May. 6	54.5	155		(died on May 2)		
Aug. 31	131	465	Jul. 23		Jul. 30	56	190		55	155	Jul. 23			
Oct. 30	131	490	Oct. 20		Sep. 30	57	210		55	170				
Dec. 30	134	485			Nov. 30	57	190	Oct. 5	56	165	Oct. 5			
1976 Feb. 29	134	530			Jan. 30	57	170		56	150				
(Apr.)	<u>134</u>	<u>570</u>			Mar. 30	57	220		56	170				
Jun. 30	138	530	May 15		May 30	57	190	May 14	56	160	May 6			
Aug. 31	138	670	Jun. 24		Jul. 30	57	200		56	185				
Oct. 30	140	720	Oct. 16		Sep. 30	57	200	Sep. 29	57	175	Sep. 28			
Dec. 29	140	690			Nov. 30	57	200		57	160				

<i>T. flaviridis</i> No. 18 (♀?)				<i>T. okinawensis</i>								
	TL	BW	Sh	No. 5 (♂)			No. 6 (♂)			No. 6A		
				TL	BW	Sh	TL	BW	Sh	TL	BW	Sh
1977 Feb. 28	140	700		Jan. 31	57	185		57	160			
Apr. 29	140	700		Mar. 30	57	210		57	155			
Jun. 30	143	660	Jun. 1	May 31	57	185	May 9	57	160	May 2		
Aug. 31	143	650		Jul. 30	57	200		57	185			
Oct. 29	145	700	Oct. 4	Sep. 30	57	190	Sep. 21	57	170	Sep. 16		
Dec. 29	145	770		Nov. 30	57	190		57	150			
1978 Feb. 28	145	760		Jan. 30	57	190		57	150			
May 1	146	780		Mar. 31	57	205		57	165			
Jun. 30	146	740	May 27	May 30	57	200	May 30	57	190	May 14		
Aug. 30	150	780	Aug. 22	Jul. 30	57	190		57	185			
Oct. 30	150	820		Sep. 29	57	230	Sep. 22	57	200	Sep. 25		
Dec. 27	150	920	Nov. 12	Nov. 29	57	255		57	200			
1979 Feb. 28	150	900		Jan. 30	57	260		57	180			
Apr. 27	150	940		Mar. 30	57	260		57	190			
Jun. 29	150	880	Jun. 23	May 31	58	260		58	180	May 13		
Aug. 30	150	880		Jul. 30	59	255	Jun. 14	58	195			
Oct. 31	150	850	Oct. 30	Sep. 29	60	270	Sep. 29	60	190	Sep. 29		
Dec. 27	150	810		Nov. 29	60	270		60	190			
1980 Feb. 29	150	820		Jan. 31	60	290		60	190			
Apr. 30	150	780		Mar. 30	60	280		60	180			
Jun. 30	150	780		May 30	60	330		60	210	Apr. 30		
Aug. 30	150	860		Jul. 30	60	330	Jun. 4	60	240	Jun. 24		
Oct. 29	155	940	Oct. 11	Sep. 29	60	280	Sep. 29	60	220	Sep. 29		
Dec. 27	155	1020		Nov. 29	61	315		60	210			
1981 Feb. 27	155	1000		Jan. 30	61	300		60	200			
Apr. 30	157	1080	Apr. 28	Mar. 30	61	320		60	200			
Jun. 30	157	1120		May 29	61	370		60	220	Apr. 30		
Aug. 31	157	1120	Aug. 3	Jul. 30	61	380	Jun. 9	60	270			
Oct. 29	161	1180	Oct. 28	Sep. 29	62	400		60	250	Sep. 29		
Dec. 28	161	1260		Nov. 30	63	410	Sep. 29 Oct. 29	60	250			
1982 Feb. 28	161	1260		Jan. 29	63	420		60	235			
Apr. 30	161	1350		Mar. 31	63	450		60	250			
Jun. 29	161	1280	Jun. 25	May 31	63	430	May 31	60	240	Apr. 30		
Aug. 30	161	1350		Jul. 29	63	430		61	290			
Oct. 29	165	1420	Oct. 19	Sep. 30	63	475	Aug. 31	61	290			
Dec. 28	165	1500		Nov. 30	63	490	Oct. 29	61	265	Oct. 15		
1983 Feb. 28	165	1480		Jan. 31	63	450		61	260			
Apr. 20	165	1520	Apr. 28	Mar. 31	63	460		61	250			
Jun. 30	165	1520		May 30	64	490	May 30	62	270	May 14		
Jul. 21	168	Ta=19		Jun. 30	64	Ta=9.5		62	Ta=10.5			
Aug. 31	169	1470	Aug. 1	Jul. 30	64	560		62	300			

表3. その他の個体の成長記録 1個体は、孵化直後のものを野外で捕獲後飼育したもの。4個体は、孵化させた後、ハブ支所の野外放飼場に放逐し、後に再捕獲したもの。その他は、孵化後、個別飼育した。各個体について、個体(またはケージ)番号、性、マウス成体を摂食開始後の給餌頻度/月(1回の給餌は、マウス2、3匹)を記す。なお、測定間隔は不規則で、脱皮の記録のあるものについては、脱皮がなかった期間を“——”で示した。

Table 3. Growth and shedding in other individuals of *Trimeresurus*. One was captured as a hatchling. 4 were released and recaptured in the enclosure in the Division of Venomous Snakes. Rearing conditions of the other individuals were same as in Table 1-1, except rarer meals. Shedding dates were recorded in some individuals, showing no-shedding period by “——”. Each individual is shown with cage or individual number, sex, <frequency of meals per month after the first feeding adult mice>. A meal is 2-3 mice.

	Ta	TL	BW	Sh		Ta	TL	BW	Sh
<i>T. flavoviridis</i>					1983 Jul. 15	21	127	340	
					78-④, 3-1-18, No 30, ♂ <1> died on Aug. 8, 1983				
					1982 Jun. 21	14+	108	235	
hatched in 1974					1983 Feb. 18	14.5-	113.5	260	
74-①, ♀?, <2>					1983 Jul. 15	14.5+	116.5		
1983 Jul. 15	23.5	172.5	1170		78-⑤, 3-1-26, No 16, <1>				
♀?, <2>, killed in a trap					1983 Jul. 15	19.5	119.5	260	
1982 Mar. 6	19	135	600		No 5-6, laid July 30, died in 1980				
					1978 Sep. 11		38	17	
hatched in 1975					Dec. 8		47	19	Sep. 20
75-①, ♀?, <1>					1979 Jan. 11		47	20	——
1982 Jun. 18	15	108	410		Mar. 14		47	20.2	——
					May 31		51	25	May 20
hatched in 1977					Sep. 28		63	35	Jul. 1
77-①, 3-1-22, No 22, ♂ <1.5>, died on Aug. 12, 1983					U-4-1, ♂?, <1+>				
1983 Jul. 15	24	149	450		1978 Oct. 4		42	16.8	Sep.
77-②, 3-1-5, No 18, ♀?, <1.5>					Dec. 8		46	19	Nov. 10
1982 Jun. 21	19	118	370		1979 Jan. 11		46	19.8	——
1983 Jul. 15	20	122	430		Apr. 13		48	23.2	——
77-③, 3-1-4, ♂?, <1>					May 31		51	26	May 2
1982 Jun. 2	18	120	340		Sep. 28		61	31	Jul. 1
1983 Jul. 15	19	125	400		1980 Sep. 24		86	100	
					1981 Nov. 30		118	290	
hatched in 1978					1982 Jun. 2	19.5	123.5	360	
78-①, 3-1-16, No 23, ♂?, <1>					Sep. 17		128	340	
1982 Jun. 4	20	116.5	300		1983 Jul. 14	21	132	400	
Sep. 4	21	119	340		U-4-3, ♂?, <1+>				
1983 Jul. 15	21	120	350		1978 Oct. 4		44	17	Sep.
					Dec. 8		46	15.9	——
78-②, 3-1-15, No 24, ♀ <1>, killed on Aug. 12, 1983					1979 Jan. 11		46	17.9	——
1982 Jun. 2	17	113	250		Mar. 14		46	21.2	——
1983 Jul. 15	18	117	270		Apr. 13		46	20.7	——
78-③, 3-1-20, No 29, ♂? <1>					May 31		48	21.7	May 2
1982 Jun. 21	19	121	315						

	Ta	TL	BW	Sh		Ta	TL	BW	Sh	
Sep. 28		59	27	Jul. 1	<i>T. elegans</i>					
1980 Sep. 24		87	100	Sep. 25		hatched in 1978				
1981 Nov. 30		117	210			L-7, ♂, <*1.5>, laid on July 1				
1982 Jun. 21	18	121	370			○1978 Aug. 14	26	6.9		
Sep. 17		129	410			Oct. 13	31	8		Aug. 22
1983 Jul. 14	20	137	520			Dec. 23	32	8.7		—
No. 21, ♂, <1>, died on Jun. 28, 1983						1979 Feb. 28	32	10.2		—
1982 Jun. 2	21	125	310			Apr. 27	34	13		—
1983 Jun. 28	23	136	395			May. 31	36	14		May. 17
hatched in 1979						1983 Jul. 13	10.5	76	117	
♂, <1>, died on Jun. 7, 1979						released in the enclosure soon after hatching				
1979 Jun. 7	21	120	380			○1978 Aug. ** 20-23	2.8-6.8←(range)			
♂, <1>, died on Jun. 10, 1979						recaptured				
1979 Jun. 10	18.5	124.5				1978 Nov. 1	33	12.4) (may be different individuals)
♂, <1+>, captured in Sep. 1979, died on Jul. 10, 1983						" "	33.5	9		
1983 Jun. 15	19	125	300			1979 Apr. 13	8.3	48	32.5	
						Jun. 6	55	36		
<i>T. okinavensis</i>										
hatched in 1977										
77-④, 3-1-1, No 26, ♂, <2>										
1983 Jul. 15	14	77	420							

- * 1回の給餌はマウス1匹。
- ** 放飼場に放逐された孵化直後の個体のレンジ。
- * a meal is a mouse.
- ** ranges of TL and BW of hatchlings released in the enclosure.