TABLE 1. Experimental parameters, the number of burrows produced in each experiment, and the distribution of burrow architecture among experiments. Terrarium size is in gallons. Sediment moisture values are in percent total volume. Duration is in days. Burrow architectures: IC = isolated chamber; VS = vertical shaft with terminal chamber; SS = subvertical shaft with terminal chamber.

Experiment	Trials	Specimens	Terrarium	Sediment	Depth (cm)	Temp (°C)	Moisture (%)	Duration	# Burrows	# IC	# VS	# SS
1	5	4	20	100% Organic	25	25-30	60	10 to 14	17	3	5	4
1	2	4	20	100% Organic	20	25-30	60	30 to 40	18	7	5	4
2	3	4	20	Layered Organic/Sand	25	25-30	60	14	28	10	11	4
3	3	4	20	Mixed Organic/Sand	25	25-30	60	7 to 10	24	7	11	3
									87	27	32	15

TABLE 2. Quantitative measurements of vertical shafts. All measurements in cm or degrees (slope only). SH# = *Scaphiopus holbrookii* burrow cast identification number. Sediment: O = 100% organic coconut fiber; LOS = layered 100% organic coconut fiber and sand; MOS = homogenized mixture of 100% organic coconut fiber and sand.

	Depth	Length	Max Width	Min Width	Mean Width	Max Height	Min Height	Mean Height	W/H Ratio	Max Circ	Min Circ	Mean Circ	Max Slope	Min Slope	Mean Slope	Complexity	Tortuosity	Sediment
SH2	5.7	6.8	2.10	1.43	1.81	2.93	2.08	2.52	0.71	7.3	7.0	7.3	90	52	70	3	1.19	O
SH3	5.2	7.8	3.40	1.33	2.56	2.35	1.06	1.83	1.40	10.2	4.9	7.8	90	30	65	3	1.50	O
SH4	4.7	7.4	3.04	1.99	2.57	2.40	1.29	1.76	1.46	8.2	4.8	7.3	90	17	50	3	1.57	O
SH10	7.8	9.9	3.38	2.26	2.78	2.14	1.68	1.84	1.52	9.0	6.7	7.8	90	50	70	3	1.26	O
SH12	6.3	8.7	3.91	2.71	3.50	2.14	1.50	1.79	1.96	11.4	8.5	9.7	90	46	30	3	1.38	O
SH17	8.4	8.6	2.92	1.98	2.50	2.09	1.48	1.87	1.34	8.8	6.6	7.5	87	60	64	3	1.02	LOS
SH21	4.2	6.8	3.11	2.13	2.74	2.95	1.63	2.32	1.19	10.7	7.5	9.1	90	10	52	3	1.61	LOS
SH25	8.4	11.6	3.40	1.83	2.56	2.24	1.49	1.95	1.31	9.4	6.0	7.7	82	25	25	3	1.38	LOS
SH26	8.4	10.6	3.56	2.13	2.80	2.14	1.71	2.02	1.37	9.8	6.8	8.9	90	75	40	3	1.26	LOS
SH28	5.6	8.2	3.77	2.58	3.33	3.18	1.46	2.38	1.40	10.5	7.0	10.2	90	44	50	3	1.46	LOS
SH30	5.9	7.8	3.61	2.20	2.96	2.87	2.19	2.26	1.30	10.4	6.8	8.9	90	30	89	3	1.32	LOS
SH31	6.8	8.5	3.12	1.95	2.58	2.14	1.35	2.88	1.37	9.1	6.6	7.9	90	47	61	3	1.25	MOS
SH32	7.0	7.7	3.62	2.31	2.89	2.12	1.85	2.00	1.45	9.6	7.2	8.3	90	68	67	3	1.10	MOS
SH33	6.6	8.0	2.08	1.46	2.69	3.44	2.01	1.83	1.47	9.6	6.4	7.9	90	87	85	3	1.21	MOS
SH36	7.8	8.6	4.24	2.61	3.40	2.62	1.95	2.32	1.46	12.1	8.2	10.1	90	21	39	3	1.10	MOS
SH38	6.2	7.9	3.56	2.57	2.93	2.26	1.69	1.97	1.49	9.5	7.4	8.4	90	64	78	3	1.27	MOS
SH41	8.9	10.0	4.36	2.71	3.53	3.00	1.99	2.47	1.43	12.1	7.7	9.9	90	65	78	3	1.12	O
SH43	8.6	8.3	3.55	2.30	2.84	2.45	1.90	2.10	1.35	9.9	7.0	8.3	90	86	88	3	0.96	O
SH46	7.4	7.9	3.89	2.20	3.02	3.33	1.61	2.18	1.38	9.9	6.6	8.5	90	90	90	3	1.06	LOS
SH47	6.6	8.3	4.12	2.36	3.30	2.07	1.77	1.93	1.70	11.7	8.3	10.2	90	70	79	3	1.25	LOS
SH48	5.8	6.4	3.72	2.64	3.05	2.21	1.69	1.98	1.54	9.8	7.0	8.6	90	80	84	3	1.10	LOS
SH51	9.8	10.7	3.96	1.99	2.50	3.12	1.75	2.28	1.08	10.0	5.4	8.0	90	40	74	3	1.09	LOS
SH52	9.6	10.3	3.63	2.05	2.68	2.58	1.97	2.24	1.17	9.5	7.4	8.4	90	70	86	3	1.07	LOS
SH53	8.7	10.2	3.88	1.97	2.89	3.05	1.93	2.12	1.29	10.0	6.6	8.4	90	60	73	3	1.17	MOS
SH54	6.7	8.3	3.89	2.18	3.02	2.42	1.78	2.36	1.42	12.0	7.1	8.8	90	65	78	3	1.23	MOS
SH56	5.5	9.1	5.09	3.21	4.07	3.25	2.21	2.63	1.47	14.9	10.5	11.9	90	10	40	3	1.65	MOS
SH59	10.1	11.2	4.72	2.77	3.37	3.64	2.00	2.63	1.28	11.4	8.5	9.8	90	45	81	3	1.11	MOS
SH61	5.8	8.8	4.00	2.99	3.51	2.45	1.90	2.25	1.55	10.7	8.5	9.7	90	44	64	3	1.51	MOS
SH62	6.1	6.7	4.47	3.48	4.03	3.17	2.17	2.47	1.63	12.2	10.3	11.4	90	90	90	3	1.09	MOS
SH69	9.5	11.0	4.13	2.16	2.09	2.80	2.11	2.49	0.84	11.6	7.4	9.6	90	65	76	3	1.15	O
SH70	6.4	6.5	3.24	2.37	2.83	2.93	2.03	2.52	1.12	10.0	7.5	8.8	90	85	87	3	1.01	O
SH71	9.2	11.8	4.39	1.97	3.06	3.36	2.54	2.92	1.05	13.5	7.3	9.9	70	70	70	3	1.28	O

TABLE 3. Quantitative measurements of subvertical shafts. Refer to Table 2 caption for legend.

	Depth	Length	Max Width	Min Width	Mean Width	Max Height	Min Height	Mean Height	W/H Ratio	Max Circ	Min Circ	Mean Circ	Max Slope	Min Slope	Mean Slope	Complexity	Tortuosity	Sediment
SH5	7.0	9.5	3.44	2.80	3.12	3.69	2.01	2.94	1.06	12.9	6.6	10.5	75	44	50	3	1.36	O
SH7	3.7	8.5	4.27	2.48	3.49	3.08	1.34	2.37	1.47	11.6	7.0	10.0	67	44	40	3	2.29	O
SH8	4.1	6.8	2.78	1.76	2.29	2.27	1.31	1.98	1.16	9.0	6.5	7.7	62	25	45	3	1.65	O
SH11	6.3	9.0	4.07	2.48	3.26	2.85	1.63	2.19	1.49	10.7	5.9	9.3	75	30	20	3	1.42	O
SH13	4.2	4.7	3.57	3.01	3.34	3.37	2.04	2.59	1.29	11.6	9.1	10.7	85	18	50	3	1.11	LOS
SH14	9.2	12.1	3.89	1.83	2.84	2.61	1.57	2.28	1.25	10.6	6.7	8.8	65	38	51	3	1.31	LOS
SH22	6.4	6.9	3.67	2.16	2.79	2.22	1.50	1.82	1.44	9.8	6.4	7.8	76	60	68	3	1.08	LOS
SH34	3.4	7.9	4.15	3.31	3.77	3.25	2.00	2.64	1.42	11.6	8.6	10.5	24	24	23	3	2.32	MOS
SH37	7.1	8.5	4.37	2.61	3.55	2.77	1.92	2.54	1.40	11.9	6.6	10.1	39	39	25	3	1.19	MOS
SH42	5.6	8.5	3.44	2.79	3.07	2.78	2.11	2.30	1.33	10.0	8.2	9.5	32	10	22	3	1.52	O
SH44	9.0	11.0	3.48	2.23	2.69	2.37	1.83	2.00	1.34	9.6	7.4	8.0	64	20	40	3	1.22	O
SH45	8.3	9.4	3.63	2.10	2.85	3.13	1.56	2.14	1.33	10.0	7.2	9.3	64	36	50	3	1.13	O
SH49	6.4	7.5	4.20	3.27	3.65	2.67	1.50	2.26	1.61	11.1	7.9	9.9	63	45	53	3	1.20	LOS
SH57	6.7	10.7	4.09	2.85	3.53	3.53	2.37	2.32	1.34	12.1	8.3	10.3	59	38	46	3	1.59	MOS
SH74	3.3	7.4	3.38	2.07	2.78	2.89	1.42	1.91	1.45	9.2	7.4	8.3	60	20	30	3	2.24	O

TABLE 4. Quantitative measurements of isolated chambers. Refer to Table 2 caption for legend.

	Depth	Length	Max Width	Min Width	Mean Width	Max Height	Min Height	Mean Height	W/H Ratio	Max Circ	Min Circ	Mean Circ	Max Slope	Min Slope	Mean Slope	Complexity	Tortuosity	Sediment
SH1	3.5	7.6	3.07	1.90	3.49	4.19	3.03	2.51	1.39	11.0	10.5	10.9	30	30	30	2	2.17	O
SH6	6.9	8.4	3.95	2.48	3.32	3.28	1.67	2.54	1.31	10.9	6.8	9.7	50	50	63	2	1.22	O
SH9	2.7	5.9	3.21	1.56	2.59	2.03	1.13	1.74	1.48	9.2	3.6	7.6	34	34	34	2	2.18	O
SH15	3.1	3.7	3.78	3.00	3.39	2.54	2.19	2.40	1.41	12.6	10.2	11.3	40	40	40	2	1.19	LOS
SH16	2.5	3.3	3.52	3.30	3.41	3.25	3.00	3.12	1.09	13.6	12.3	13.0	9	9	9	2	1.32	LOS
SH18	2.8	5.1	3.00	2.29	2.73	3.15	1.46	2.31	1.82	9.9	8.4	8.8	24	24	24	2	1.82	LOS
SH19	4.9	5.8	3.24	2.19	2.87	2.14	1.62	1.93	1.48	9.9	8.4	9.0	90	90	90	2	1.83	LOS
SH20	4.7	5.0	3.57	2.61	3.25	2.06	1.93	2.07	1.57	9.4	8.3	9.1	80	80	80	2	1.06	LOS
SH23	6.2	8.0	3.35	1.41	2.74	2.74	1.38	2.29	1.19	11.5	6.6	9.9	65	65	65	2	1.29	LOS
SH24	5.6	7.8	4.03	3.78	3.94	2.61	2.11	2.31	1.70	11.5	10.5	11.2	28	28	28	2	1.39	LOS
SH27	4.3	8.2	3.23	2.65	2.87	2.71	1.47	2.11	1.35	10.7	7.0	9.6	40	40	40	2	1.95	LOS
SH29	6.6	8.8	3.55	2.33	3.10	2.92	2.06	2.35	1.32	8.4	8.4	8.4	46	46	46	2	1.33	LOS
SH35	6.4	8.2	4.08	2.37	3.40	3.05	1.55	2.34	1.45	11.0	7.9	9.7	35	35	35	2	1.28	MOS
SH39	5.4	6.2	3.63	2.02	2.89	2.44	1.30	2.05	1.41	10.0	5.5	8.6	73	73	39	2	1.14	MOS
SH40	7.9	9.3	3.83	1.99	3.11	3.30	2.01	2.62	1.19	11.1	8.5	9.9	52	52	52	2	1.17	MOS
SH50	3.1	9.2	3.60	2.98	3.30	2.13	1.83	2.01	1.64	9.6	7.7	8.8	20	20	20	2	2.96	MOS
SH55	3.9	6.9	3.17	2.93	3.05	2.74	2.13	2.76	1.29	10.0	9.2	9.5	60	60	60	2	1.76	MOS
SH58	5.6	11.0	3.28	1.90	2.68	3.28	1.63	2.30	1.16	11.0	5.6	8.1	60	40	53	2	1.96	MOS
SH60	3.4	3.6	3.42	2.79	3.17	2.77	2.21	2.54	1.24	9.9	9.3	9.6	90	90	90	2	1.06	MOS
SH63	5.2	6.0	3.99	3.00	3.55	2.19	2.69	1.88	1.88	11.6	9.0	10.4	90	90	90	2	1.15	MOS
SH64	5.4	9.4	5.71	3.79	4.66	3.88	2.93	3.34	1.40	16.0	12.6	13.9	60	70	60	2	1.74	O
SH65	3.9	4.5	3.82	3.48	3.65	3.86	3.33	3.54	1.01	12.9	10.1	11.4	28	28	28	2	1.15	O
SH66	5.7	8.5	4.40	3.12	3.59	3.28	2.04	2.66	1.34	11.9	8.8	10.7	90	34	50	2	1.49	O
SH67	4.1	8.7	4.76	2.79	4.20	4.32	1.97	3.18	1.32	14.7	9.5	12.2	34	34	34	2	2.12	O
SH68	4.7	8.6	4.10	2.36	3.75	3.42	1.77	2.78	1.34	12.2	7.5	10.5	57	57	57	2	1.83	O
SH72	5.4	7.0	3.37	2.84	3.10	3.50	1.42	2.61	1.18	12.0	8.4	10.3	90	26	52	2	1.30	O
SH73	4.3	6.4	3.10	2.48	2.83	2.69	1.77	2.18	1.29	9.3	7.3	8.3	71	25	49	2	1.48	O

TABLE 5. Width and height of each toad compared to mean width and height values of the terminal chambers produced by each toad. All measurements are in cm.

	Body Measurements		Chamber Measurements	
	Width	**Height**	**Width**	**Height**
Specimen 1	4.00	3.50	4.00	4.75
Specimen 2	4.00	3.50	4.10	3.65
Specimen 3	3.00	2.50	3.72	3.23
Specimen 4	3.50	3.50	3.36	3.61

TABLE 6. Properties of dwelling traces (VS and SS) and a single resting trace (SHT16). Burrow architectures: VS = vertical shaft with terminal chamber; SS = subvertical shaft with terminal chamber; RT = resting trace.

		Depth	Length	Max Width	Min Width	Mean Width	Max Height	Min Height	Mean Height	W/H Ratio	Max Circ	Min Circ	Mean Circ	Max Slope	Min Slope	Mean Slope	Complexity	Tortuosity
VS	Mean	7.18	8.76	3.68	2.26	2.94	2.68	1.80	2.19	1.35	10.46	7.23	8.89	89.00	54.99	67.80	3.00	1.24
	SD	1.60	1.53	0.61	0.47	0.48	0.47	0.31	0.30	0.23	1.53	1.22	1.13	3.78	23.53	18.23	0.00	0.18
SS	Mean	6.04	8.56	3.76	2.51	3.13	2.89	1.73	2.30	1.35	10.78	7.23	9.30	60.63	32.66	40.80	3.00	1.50
	SD	1.96	1.86	0.43	0.48	0.42	0.44	0.32	0.32	0.14	1.16	0.92	1.07	16.90	13.25	14.00	0.00	0.43
RT		2.50	3.30	3.52	3.30	3.41	3.25	3.00	3.12	1.09	13.60	12.30	12.95	9.00	9.00	9.00	2.00	1.32