## CHART FOR DETERMINING THE SPHAERODACTYLS OF THE PORTO RICO REGION

CHAPMAN GRANT, Major, United States Army

It is hoped that the reader has seen the paper by the same author describing five new *Sphaerodactyls* and reestablishing another in the July number of this Journal as this chart is for the ready determination of these and the new species described in this number of the Journal. Altogether there are eight species now known from this region.

I find that a key has an objectionable feature because a decision must frequently be made on a matter of opinion or definition. A reader unfamiliar with a group may be led astray by a wrong choice while using a key. In the present chart any specimen may be referred to any of the thirteen columns. There is no necessity for starting over as is necessary with a key, because if one column leads to an impasse with a certain specimen, the student may ignore that character and run down one of the other columns.

In making an identification it is advisable first to determine the sex of the specimen. It will be noted that three of the eight species have sexual dichromatism. Sex determination immediately narrows the field.

Sex determination is easy in this genus. Examine the belly scales with a hand lenz. The male has a chevron shaped patch of noticeably flat or slightly concaved and usually lighter colored scales anterior to the vent. The branches of the chevron extend onto the hind legs. The scales of this part of the female are not differentiated. See Plate XX. July number of this Journal.

Use of the Chart. Explanation of Terms.

In Column 6, the "cross" on the head of S. monensis is more or less a matter of opinion. I will gladly adopt a more comprehensive term. The advantage of the term "cross" is that there are various types of crosses. There are also various designs on the head of S. monensis.

"The target" is an oval occipital spot encircled by an oval ring, usually of the same color.

Columns 7 and 8. The species of this group have a dark line or the vestiges of one, beginning at the eye and extending backwards for various distances according to the species. This line is bordered

above by a lighter line, also extending variously according to the species.

Column 9. The "chin" bears a pattern that is quite specific in certain forms. By "chin" is meant the area from the mental to a line joining the bulbs of the lower jaw. Some might call it the "throat".

Column 10. The "scapular pattern" is a feature of this genus. It is best shown in S. grandisquamis. In this species it usually consists of a black blotch across the shoulders, outlined by white and bearing two white dots. The resemblance to a mask is striking. "Spectacle" is suggested by Dr. Barbour for the scapular pattern when it tends to change from a mask to two little tangent targets.

Column 11. The "sacral pattern" is second only to the scapular pattern in this genus. Usually it is most conspicuous at the region of the sacrum, but is frequently repeated several times along the tail. Generally it is formed by a continuation or reappearance of the ocular white line and the outermost dorsal dark line or line of dots which is intensified at this point. The form and degree of this pattern is specific.

Columns 9, 12 and 13. Keels: It is very difficult to determine whether or not certain scales are keeled in these species. It is necessary to let the specimen become slightly dry and to scan it with a hand lenz in a mild light that comes from the side. A bright light or a direct light, moisture or too high magnification make the keels almost invisible.

Notes to Sphaerodaetyl Chart.

- 1. Fades in alcohol.
- 2. The Culebra form only is covered in this chart. The form from Vieques is covered by these notes where it differs from the Culebra form and is referred to by the letter "V". The Culebra form is referred to by the letter "C".
- 3. Red head. The C has a plain red head above in 22 per cent of the males, with no intermediate forms with the speckle head males. The V has a larger per cent of red head males and the red continues underneath the head as red or orange. Some have a dark occipital spot on the red head and some have spotted or marbled chins, whereas C invariably has a white chin and no occipital spot.
  - 4. Brown. The V is much darker brown than C.
- 5. V males, not the red heads, have regular "target" or mottled head.
  - 6. See Note 3.
  - 7. In V this line is much darker, nearly black.

(14)		Mo, of specimens taken	344	142	9		<b>#</b>	51	228		529		Si i	
(13)		Hexagonal Regular		+-	1 + 1		l				I			1
	nont	obiW Irregular	+	į	1		ı	I	I		I		1	
	Seales on Snout	Elongate Regular	1	ſ			+-	+	+		+		+	
	Seal	Keeled	smooth or almost	except first row	except first and second rows		except first row	except first & second rows	except first row		except first row			ali keeled
(12)	es on	Belly	I	I	*		+	ı			j		<u> </u>	
	Keeled Scales on	Diest	1	l	1		+		1		1		+	
	Kee	Collar	+	1	+	+.		+	+		+			+
(11)	Sacral Pattern	Form	parallel lines	a ''y'' of dark lines	vivid parallel lines	"shadow" lines	unusual, parallel lighter lines	if present, a white 'H'' outlining a black croscent forward	black half moon outlined behind with white. repeated	parallel lines	black transverse blotch, light stripe behind 14	1		lighter lines outlining scallops
	S	Present	no true pattern	seldom		-	L	indistinct if present	usually present	rarely present	unusual 13	L	1	hardly discernible
(10)	Scapular Pattern	Form	rare scattered light dots, no black	two light dots outlined in dark	parallel lines	parallel "shad- ow" lines	two light dots	"mask" tending towards ''spectacles"	large ''mask''	small "mask" or none	small ''mask''	very small ''mask''		two light dots
		Present	1	faint	1		faint	moderate	vivid	strong	strong 12	very small or	2	faint or wanting
(6)	Chin	Keeled	smooth or almost smooth	except first row weak	smooth		strongly except border- ing mental	smootb			except group bordering mental weak or all smooth		all strong	
		Color	clear	clear	white		ргоwп	white	usually clear	spotted	black and	speckled 10	white 11	black 1 with white spots
	Light Eye Line	Extent	onto tail	1	to hind leg if present to hind leg		to shoulder	to ears	to scapular pattern		to scapular pattern or to tail	to ear	1	to ear
8		Color	light, more promi- nent	1	white, vivid	none or	if present lighter brown than head markings	indistinct	more prominent than dark line	none or indistinet	light brown wider than dark line 9	indistinct light brown		lighter, hardly discernible
	Dark Eye Line	Extent	does not reach ear	soldom behind ear	Suddill behind ear to hind leg		11	to ears	to scapular pattern		to shoulder	to ear _	I	to ear
(1)		Color	brown, samo as head. Indistinct	brown, same as head. Indistinct.	black, vivid	none or "shadow"	if present dark brown like head markings	if present lighter brown than head markings	lighter brown than head markings	none or indistinct	same dark brown <b>7</b> as head markings	usually black like dots on head \$		black, hardly discernible
(9)	Head Pattern	Form	1	1	vived parallel lines	"shadow"		, cross,,	"target"	weak "target"	11	specks	9	"ehevron"
		Present	ı				1	weak	vivid	rarely	strong	weak	1	weak
	(5)	Gen'l Color Above	brown	brown	black and white gray		dark brown	gray	brown		brown	gray	gray brown redhead 3	"black"
	£)	Av. Adult Size	20	40	70		99	8	8			90		45
And the second s	(8)	Habitat	Cape San Juan, P. R. Caja de Muertos and Vieques	Cabo Rojo, region, P. R.	Cabo Rojo, region, P. R.		mountains of Porto Rico	Mona Island	- Porto Rico		Culebra, 2 and Vieques,		mountains of Yabucoa, P. R.	
	ଶ	Sex Dichro- matism		1	female	male	1	1	female	male	female	male	male	<b> </b>
	(3)	Sphaero- daetylus	townsendi, Grant	nicholsí, Grant	ronsevelti, Grant		klauberi, Grant	monensis, (Mecrwarth)	grandisquamis Stejneger		danforthi, Grant			gaigeae, Grant

ů

- 8. V males have the dark eye line a light brown instead of "black".
  - 9. White in V.
  - 10. In V, gray or black and white speckled or striped.
- 11. In V, orange or white or gray or mottled. The orange fades in alcohol.
  - 12. In V, reduced or wanting.
  - 13. In V, usual.
  - 14. In V, same pattern, but repeated several times onto tail.