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THE BALEARIC LIZARD: *PODARCIS LILFORDI* (GUNTHER, 1874) (SAURIA, LACERTIDAE) OF MENORCA (1)

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1. INTRODUCTION

The populations of *Podarcis lilfordi* (GUNTHER, 1874) of the Balearic Islands have recently been the object of some revisions and taxonomic studies (SALVADOR, 1977, 1979). However, an updated study on *P. lilfordi* in Menorca is still lacking. The problem of this island and its *Rassenkreis* was examined by MULLER (1929) and more extensively by EISENTRAUT (1928, 1950).

As in the case of Mallorca, the main peculiarity of the Menorcan balearic lizard fauna lies in the fact that *P. lilfordi* is at present almost extinct on the

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island of Menorca and only persists on its surrounding islets. Such a situation is the result of the introduction of *Macroprotodon cucullatus* which has decimated the balearic lizard (EISENTRAUT, 1949, MERTENS, 1957). In spite of this, other authors have suggested that the cause of this extinction would lie in the interespecific competition with another foreign saurian: *Podarcis sicula* (ALCOVER, MOYÁ & PONS, 1981) and/or certain mammals such as *Erinaceus algirus*, and have also attributed it to certain post-glacial climatic changes (COLOM, 1962).

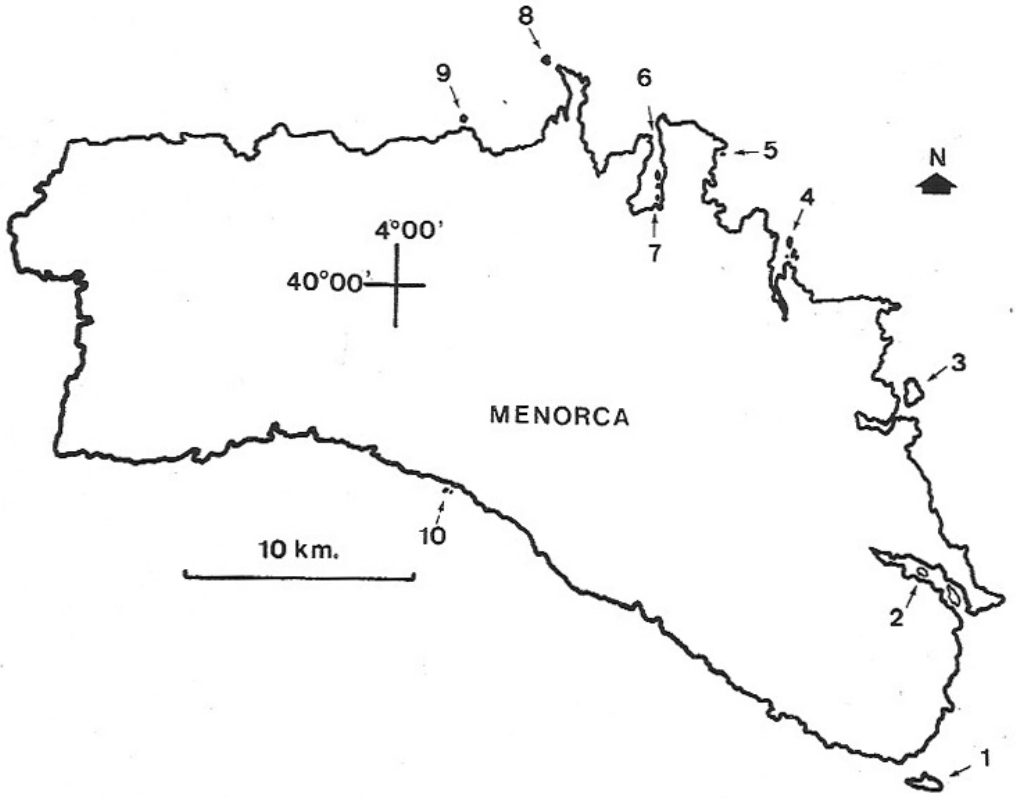

FIGURE 1 — Situation of the populations of the archipelago of Menorca studied: 1. Isla del Aire, 2. Isla del Rey (or Hospital), 3. Isla Colom, 4. Islas Addaya, 5. Sen Tosqueta, 6. Bay of Fornells, with islets of Sargantana and Rovells, 7. Porros (Bay of Fornells), 8. Isla de Nitge, 9. Escull de Bledas, 10. Esculls de Codrell I and II.

In any event, *P. lilfordi* at present may not be found on Menorca, not even after intentional reintroduction in the area of the port of Mahon (EISENTRAUT, 1949, ALCOVER & MAYOL, 1981). The extinction of this species dates back to a time after the end of the Holocene, since its presence in this latter period has been demonstrated in the paleontological remains

found at Binicalaf, from the third century B.C. (ALCOVER, MOYÁ & PONS, 1981, KOTSAKIS, 1981).

The present work examines only the results of our taxonomic study. Future communications will deal with the ecology of this species.

2. MATERIALS AND METHODS

A total of 449 specimens was studied belonging to the populations of 17 islets off the Menorcan coast: 1. Isla del Aire, off the southern coast (figure 2), 2. Isla de Nitge or Porros, off the Northern coast to the North of

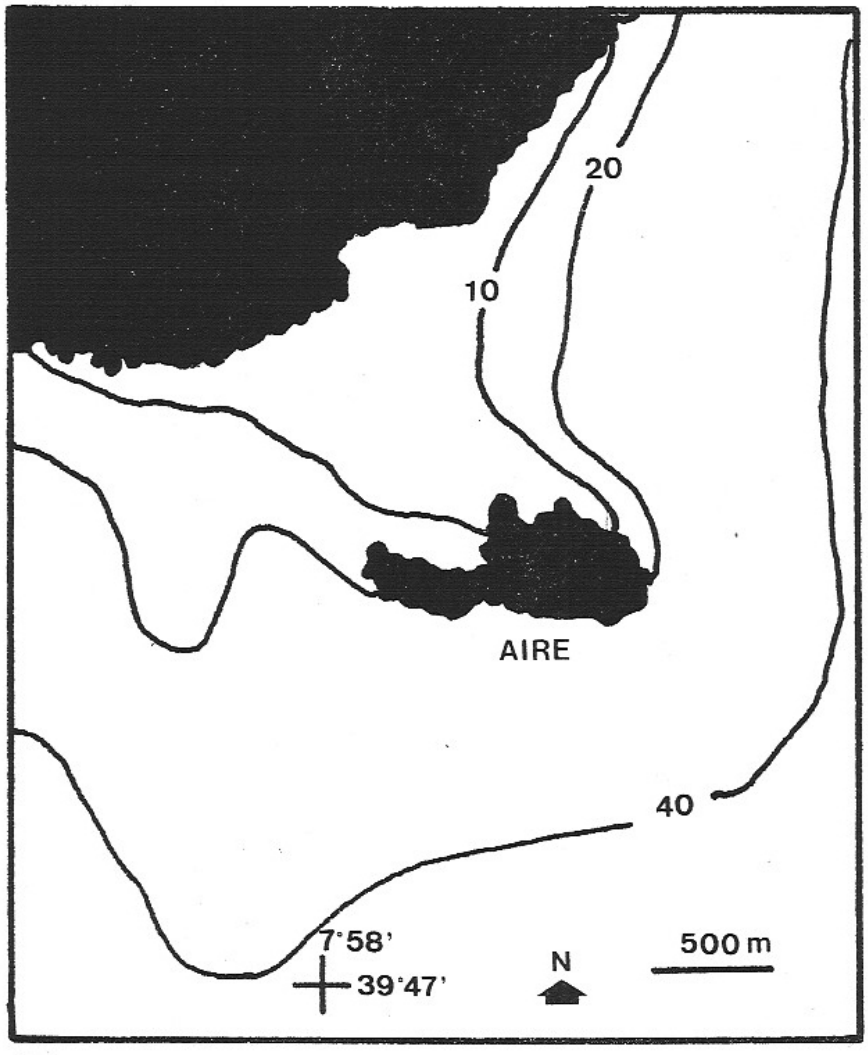

FIGURE 2 — Isla del Aire. Numbered lines represent bathymetric curves.

Cabo Caballería (figure 3), 3. Isla Gran Addaya, 4. Isla Petita Addaya, both to the East of Na Macaret off the Northern coast (figure 4), 5. Isla de Hos-

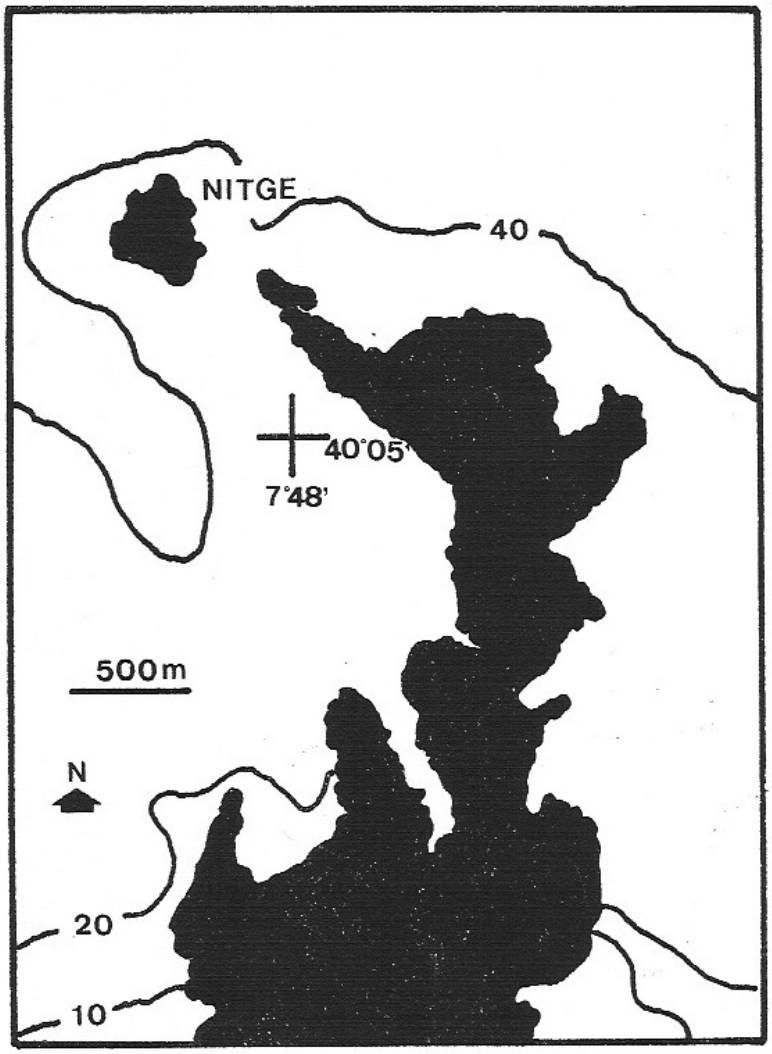

FIGURE 3 — Isla de Nitge (or Porros).

pital or Del Rey, in the bay of Mahón (figure 5), 6. Escull de Bledas, off the northern coast (figure 6), 7. Isla de Colom, to the East of the beach and Albufera des Grau (figure 7), 8. Islote de Sargantana, in the bay of Fornells (figure 8), 9. Islote de S'En Tusqueta, En Tosqueta or Entuseneta (according to different references and maps) (figure 4), 10. Islote de Rovells or Robello in the bay of Fornells (figure 8), 11. Islote de Porros in the bay of Fornells

(figure 8), 12. Escull de Codrell I, 13. Escull de Codrell II, both off the southern coast (figure 9), 14. Islote de Carbonera, 15. Isla de las Ratas, in the bay of Mahón (inexistent today), 16. Escull de Ses Aligues, next to the Addayas islets (figure 4) and 17. A3, a small islet, also next to the Addayas (figure 4).

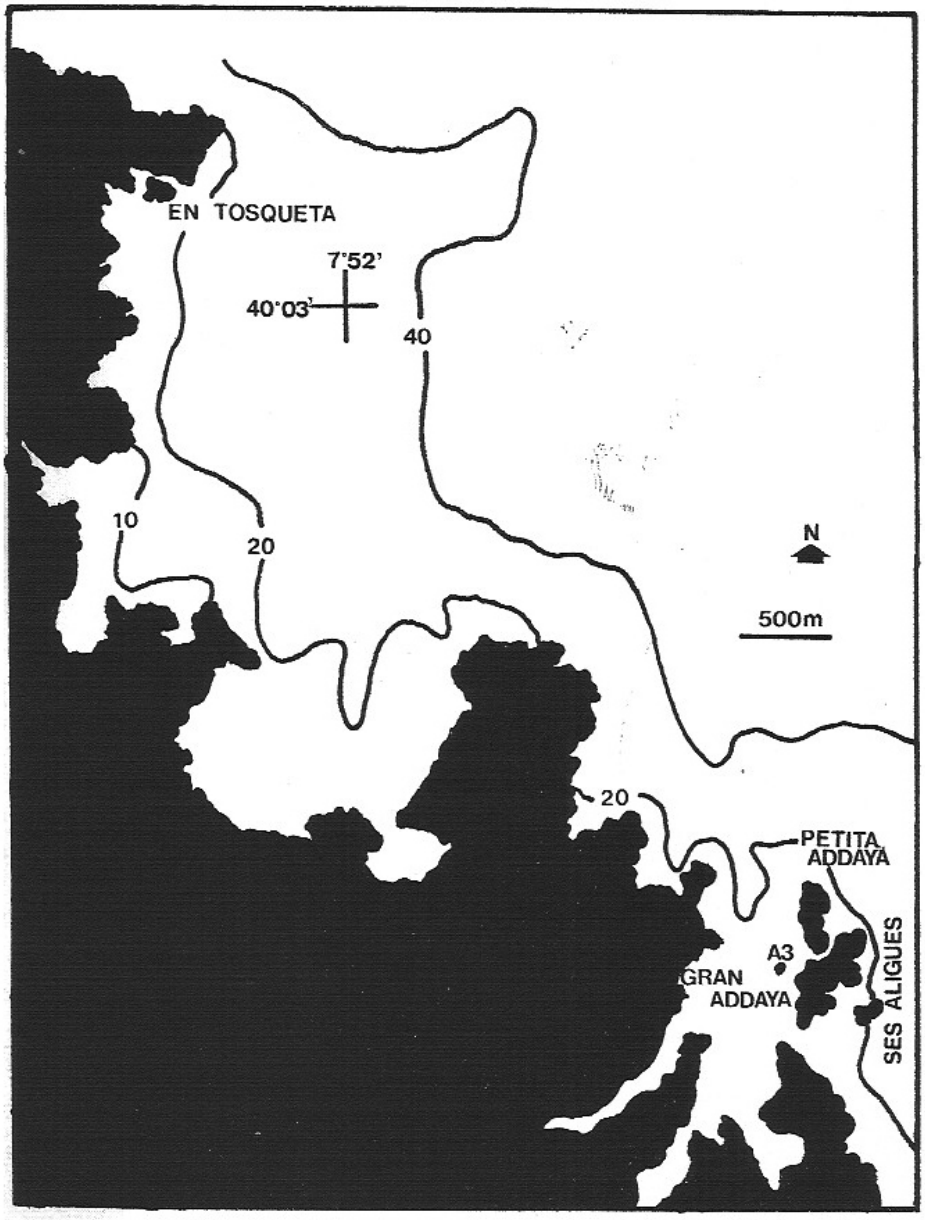

FIGURE 4 — Part of the northern coast of Menorca with the situation of Gran and Petita Addaya, Ses Aligues, A3 and the islet of Sen Tosqueta.

The similarity in characters and the very small sample size led us to group the populations of the Escull de Codrell I and II islets together. Likewise, the specimens from A3 were included with those of Gran Addaya. It was possible to note the existence of a very tiny population of the species on the islet of Ses Aligues but no specimens were captured for protectionist reasons.

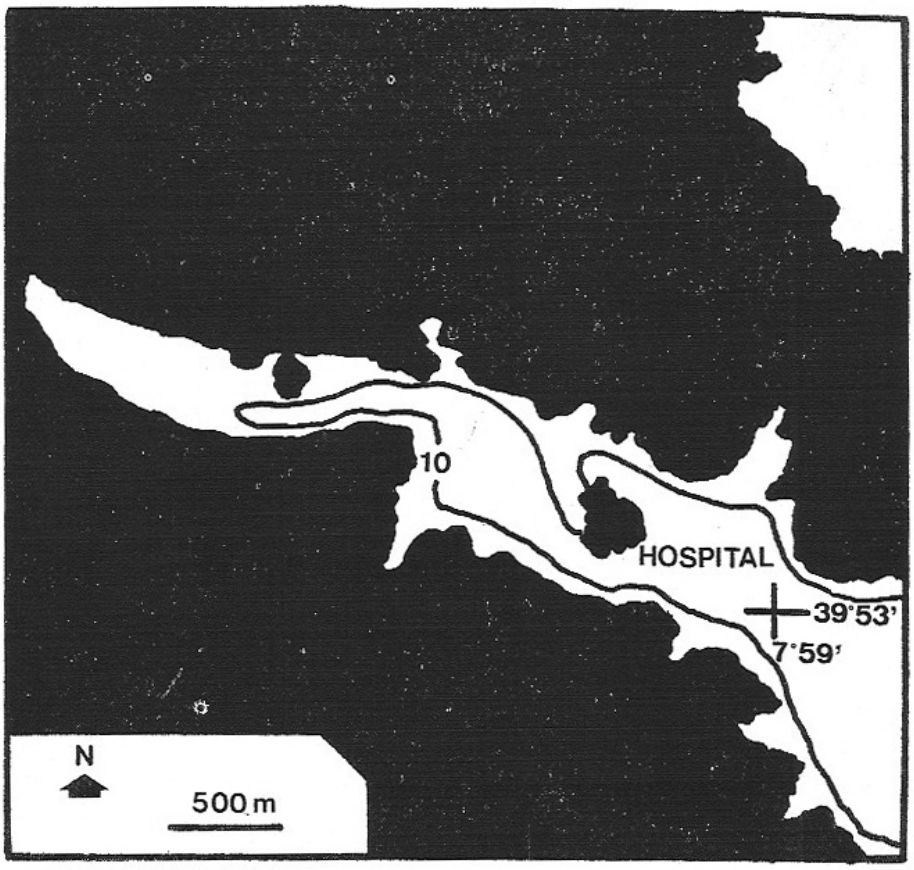

FIGURE 5 — Bay of Mahon and situation of the islet of Hospital (or del Rey).

Only male specimens could be studied from the population of the islet of Porros de Fornells and of the Isla de las Ratas.

Part of the specimens were from our own field work carried out in April and September 1982, December and January 1983. Also we have studied the specimens from the following museums: Zoologisches Forschungsinstitut und Museum Alexander Koenig (Bonn), Zoologisches Museum (Berlin) and Senckenberg Museum (Frankfurt am Main).

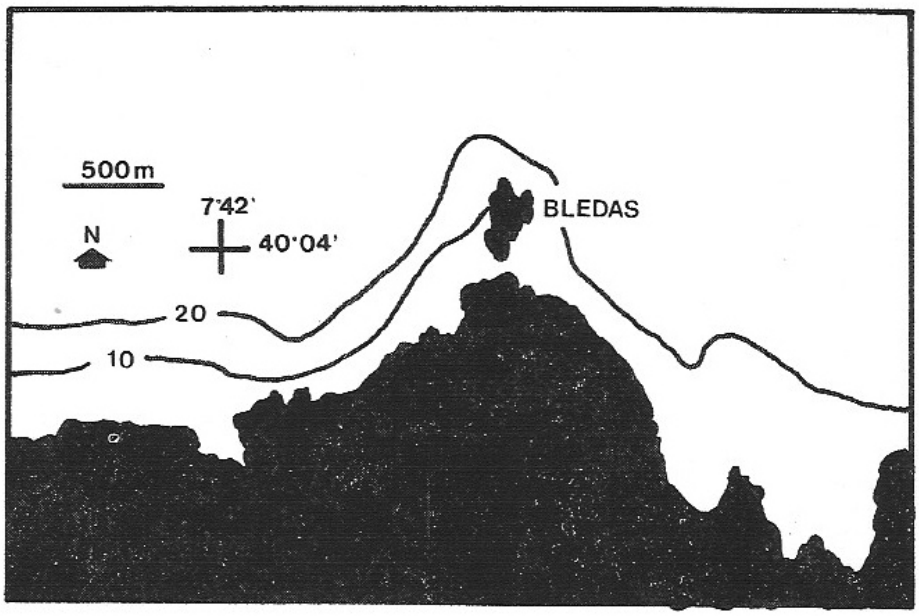

FIGURE 6 — Escull de Bledas.

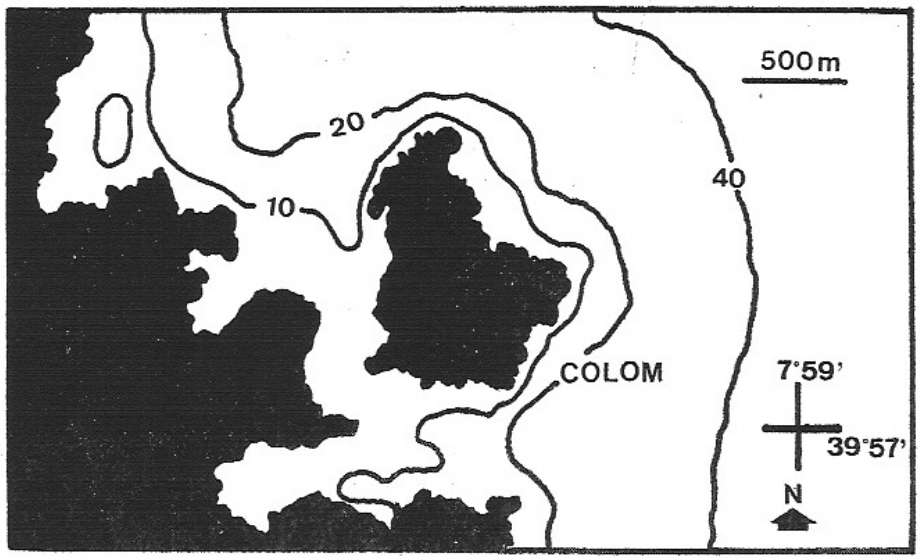

FIGURA 7 — Isla de Colom.

The section of Results is devoted to a description of each of the aforementioned populations and their biometry and folidosis are presented in Appendix (tables 1 through 28). Two different analyses were carried out from this

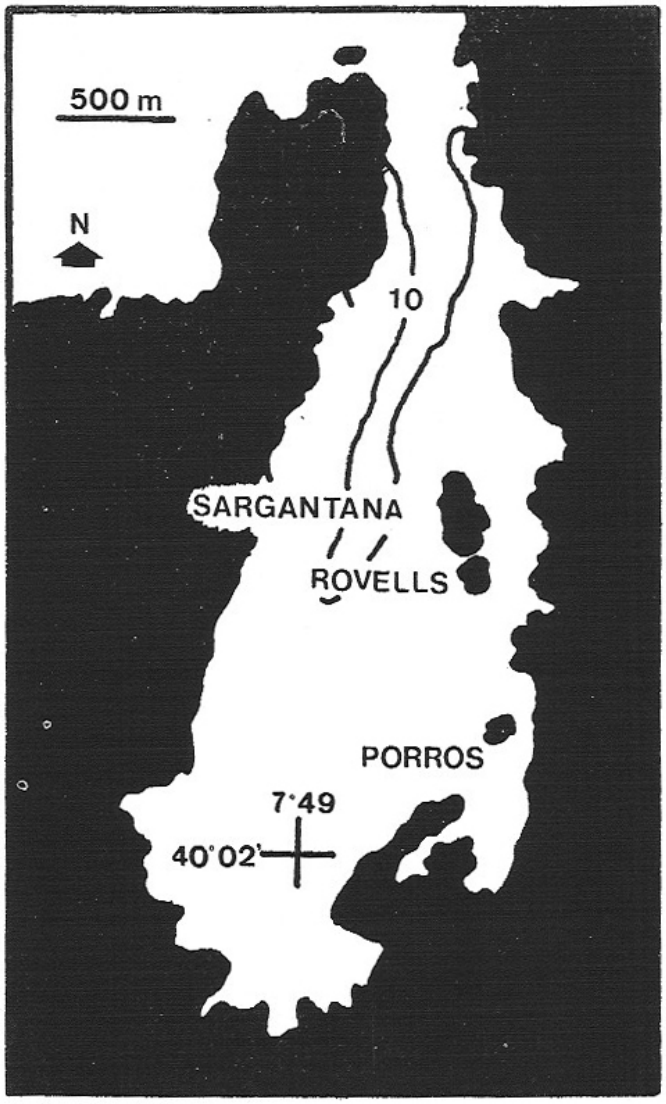

FIGURE 8 — Bay of Fornells and situation of the islets of Sargantana, Rovells (or Robello) and the islet of Porros.

set of characters. In first place an analysis of variance of single classification for each of the characters studied, separately in males and females (see SOKAL

& ROHLF, 1969), followed by the SNK test for multiple comparisons between means (SOKAL & ROHLF, op. cit.). Finally with the aim of comparing all the populations taking into account simultaneously the overall meristic characters, a Cluster analysis was carried out according to the UPGMA method

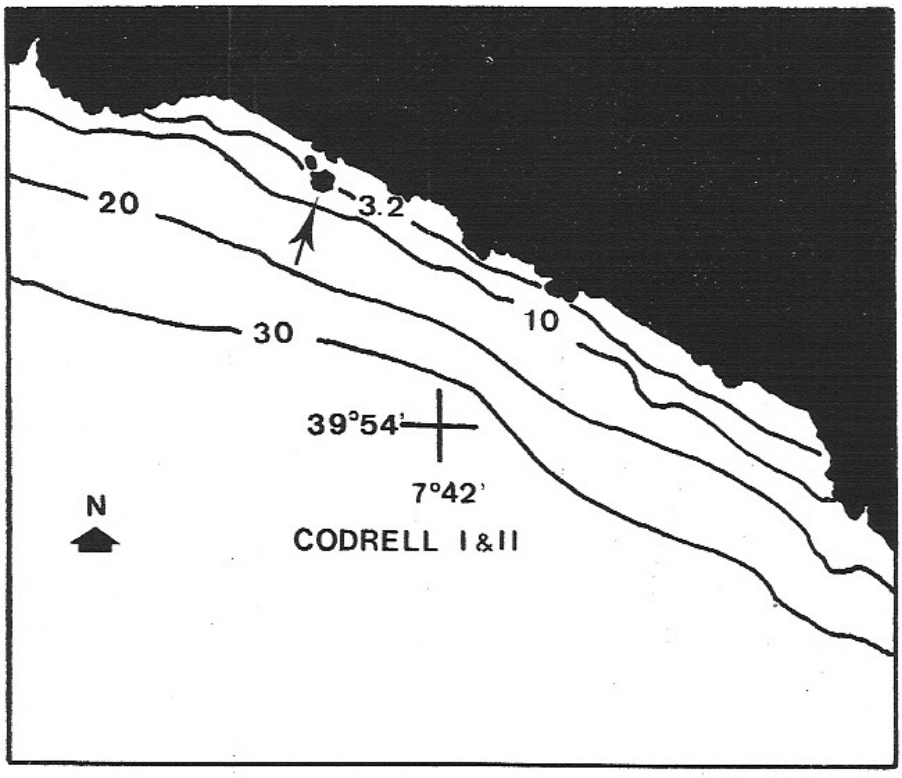

FIGURE 9 — Situation of the islets of Escull de Codrell I and II.

(SNEATH & SOKAL, 1973). To construct the initial similarity matrix the coefficient of taxonomic distance was used:

$$\Delta_{jK} = \left[\sum_{i=1}^{m} \left(X_{ij} - X_{iK} \right)^2 \right]^{1/2}$$

calculating the mean distance as:

$$d_{jK} = \sqrt{\Delta^2_{jK}/m}$$

where j and K designate the OTU's considered in the comparison, X_i is the standardized value of the character i for this OTU and n is the overall number of characters used. The results of this analysis will be a phenogram in which

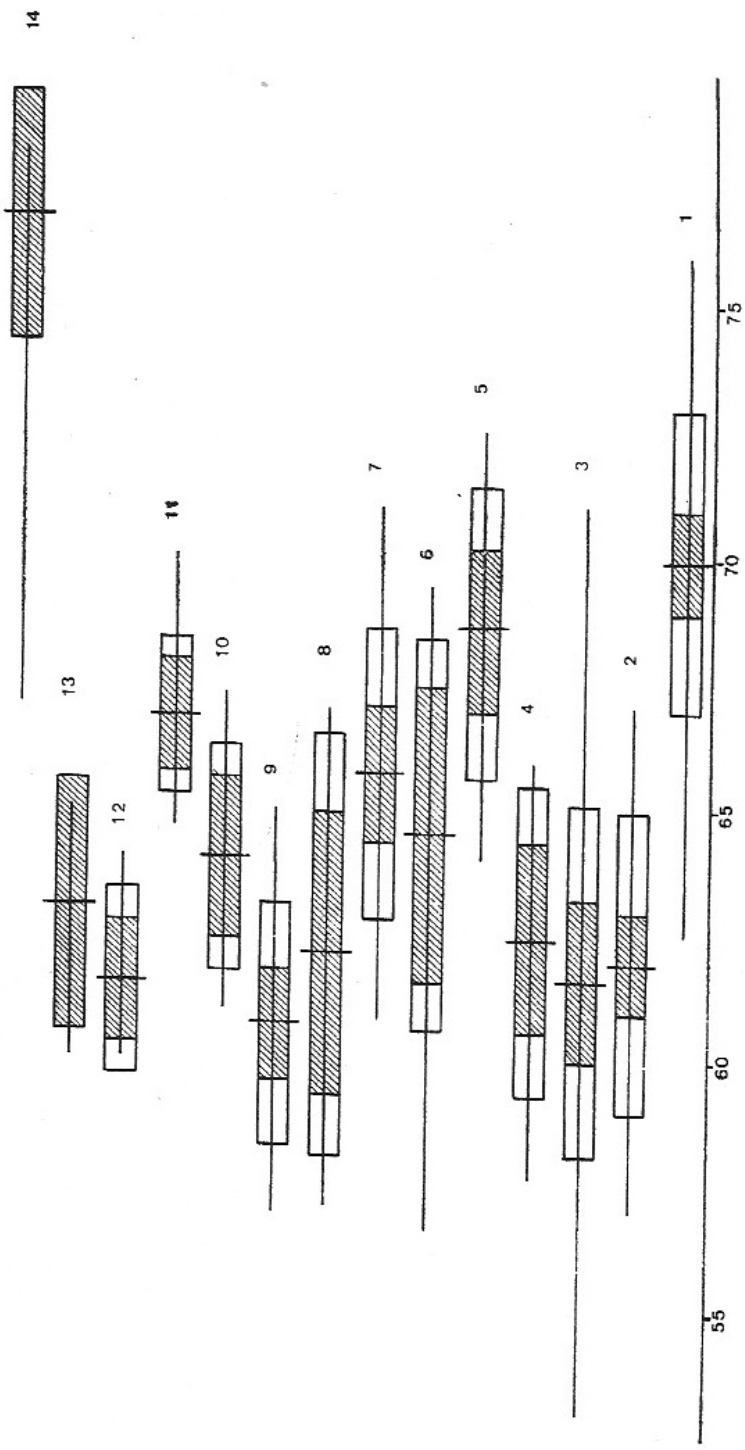

FIGURE 10 — Comparison of the values of body length(SVL) in males. Each drawing corresponds to an islet or population. The vertical line indicates the arithmetic mean of these values. The white rectangle shows the standard deviation. The shaded rectangle represents the limits of confidence at 95%. Where the figures do not depict a white rectangle this indicates that it is included within the limits at 95%. If neither of the rectangles appear this is because only one specimen was studied for each character and population. In each of the figures the numbers at the right indicate the corresponding islet or population such that: 1. Aire, 2. Nitge, 3. Gran Addaya, 4. Petita Addaya, 5. Hospital, 6. Escull de Bledas, 7. Colom, 8. Sargantana, 9. Sen Tosqueta, 10. Rovells, 11. Porros (Fornells), 12. Esculls de Codrell I and II, 13. Carbonera and 14. Ratas.

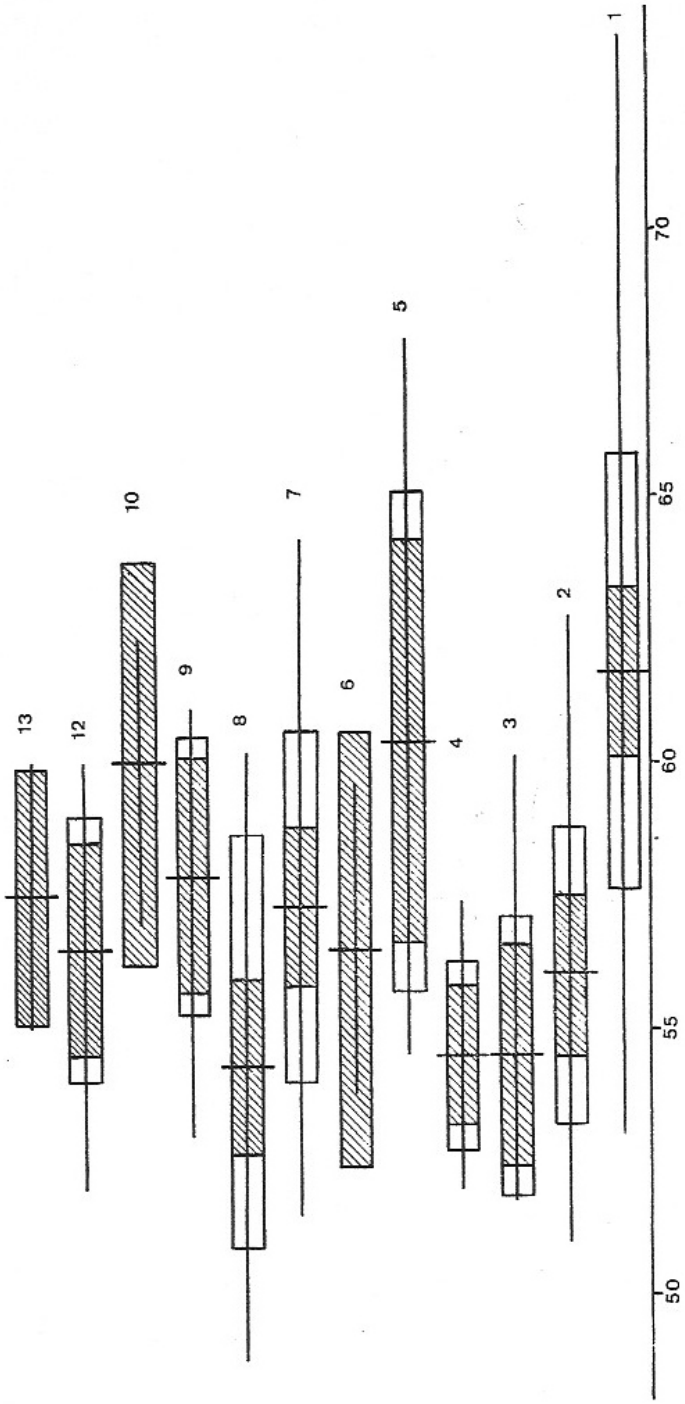

FIGURE 11 — SVL of the females.

the different populations appear grouped according to their relative taxonomic distance.

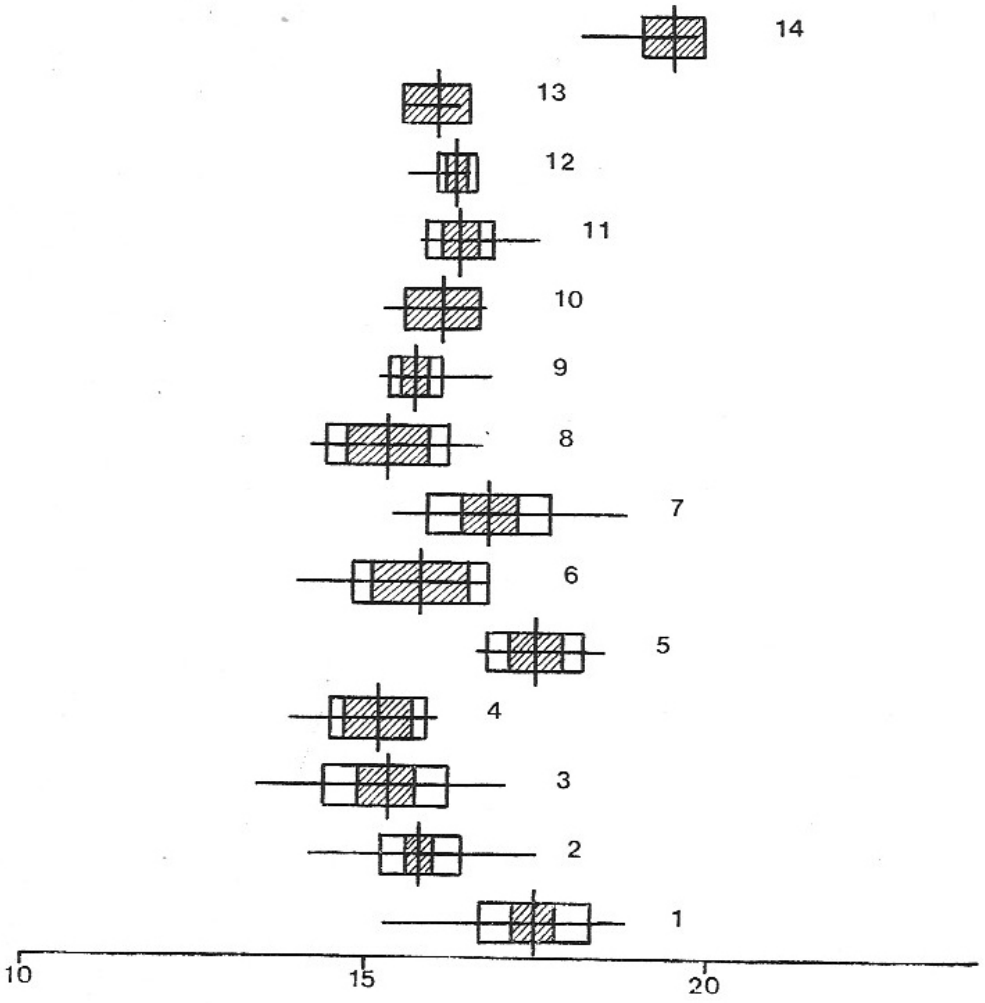

FIGURE 12 — Length of the pileus in males.

All measurements were carried out with calipers with an accuracy of $\pm$ 0.01 mm. and the tables and figures are expressed in milimetres; weight, measured with a Pesola balance is expressed in grams with an accuracy of $\pm$ 0.01 grams. To construct the figures and tables only adult specimens of both sexes were considered.

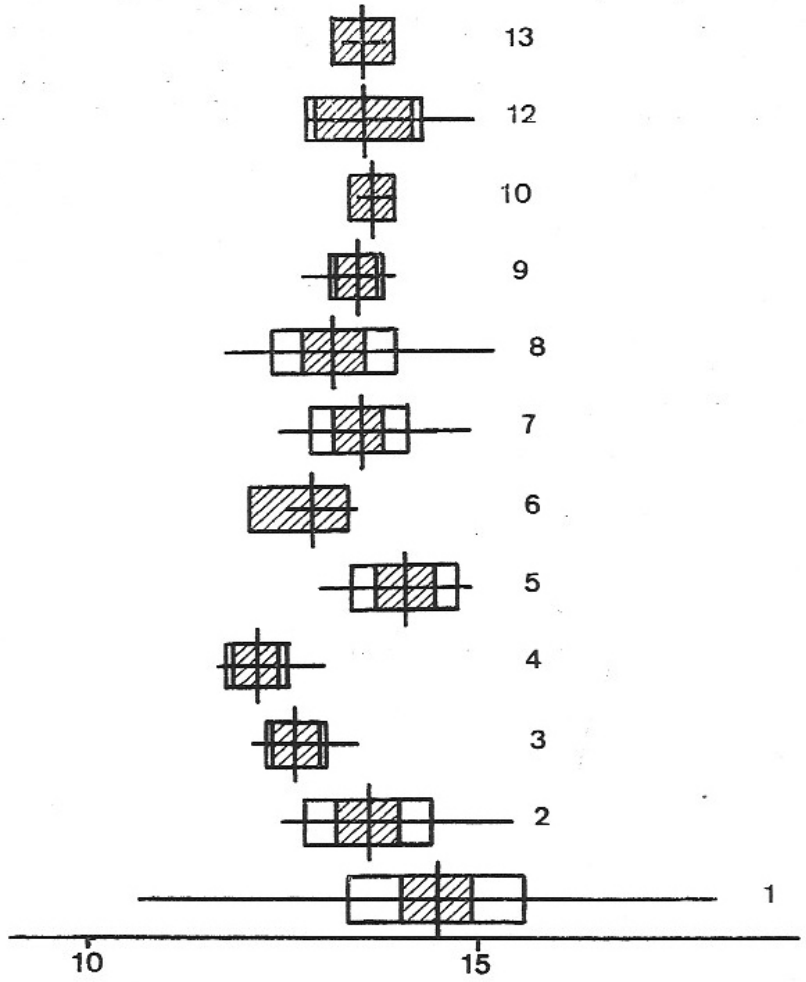

FIGURE 13 — Length of the pileus in females.

3. RESULTS

3.1. PRESENT SITUATION OF SOME POPULATIONS.

The population which was apparently introduced into the port of Mahón (EISENTRAUT, 1949) seems to be completely extinct at present (ALCOVER & MOYOL, 1981 and personal observations).

The isla de las Ratas disappeared after dynamiting in a reconstruction of the port of Mahón at the beginning of this century (COMPTE SART, 1968).

On the Isla de Lazareto, principally occupied by a summer resort of the spanish National Health Service there is also a small nucleus of *P. lilfordi* whose importance was not evaluated and of which we have no specimens. In the ZFMK museum there is a series of specimens collected by K. Grun on

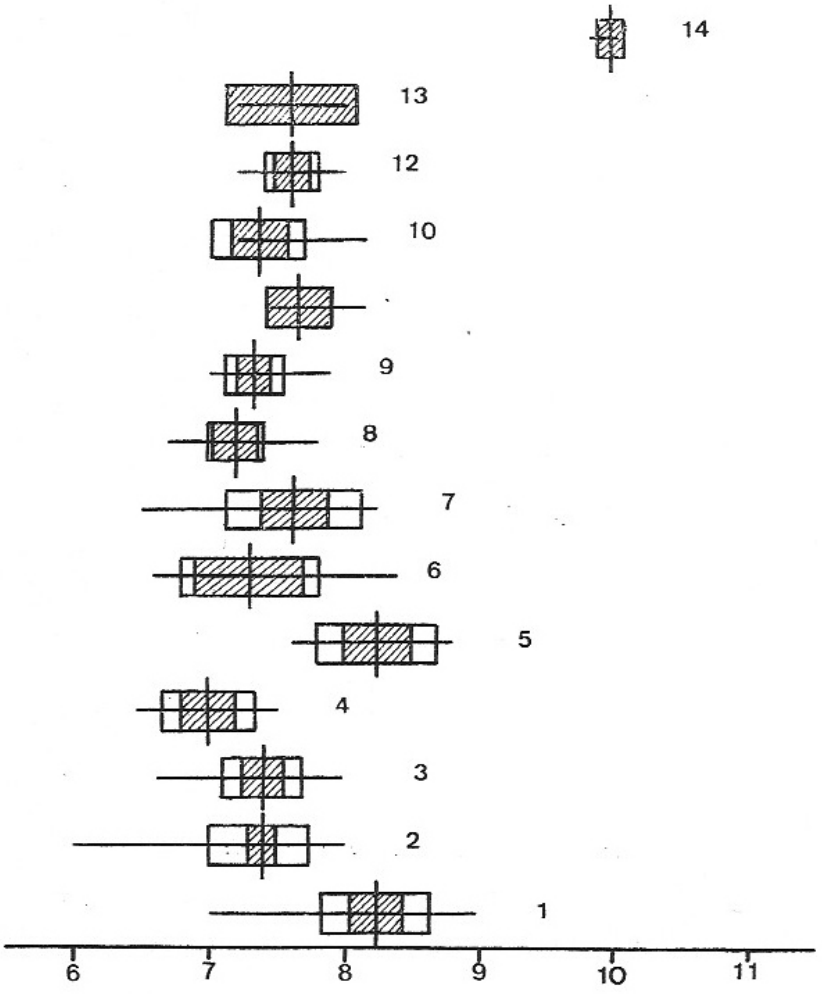

FIGURE 14 — Pileus width in males.

1 January 1933 (4 ♂♂ and 4 ♀♀) on an islet of Menorca designated «Carbonera». Possibly it is a small islet without any name in maps off the NW coast of the island facing Cala d'En Carbó in which we did not find lizards.

3.2. DESCRIPTION OF THE POPULATIONS.

Isla del Aire.

Material examined: 64 specimens, 24 ♂♂, 27 ♀♀ and 13 juveniles. A very robust population with a large body size.

Males: The upper parts are completely black. Ventral zone dark blue-black. Ultramarine blue ocelli on the outermost rows of ventral scales. Submaxillary scales blueish and dotted with transverse black spots.

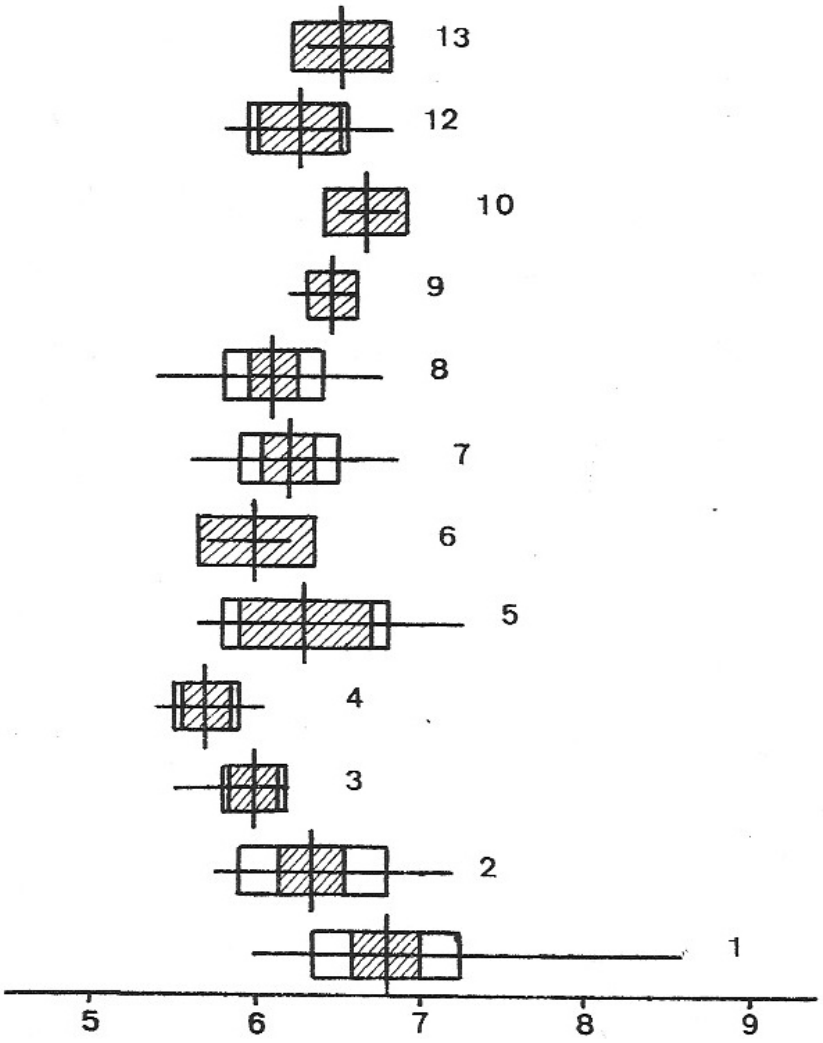

FIGURE 15 — Pileus width in females.

Females: Identical to the males. Completely melanic. Some specimens present lower parts browny grey with widespread black marks.

Juveniles: Similar to the adults, lower parts with more extensive colouring of dark grey but again always showing black spots.

Biometry and folidosis values appear in tables 1 and 2.

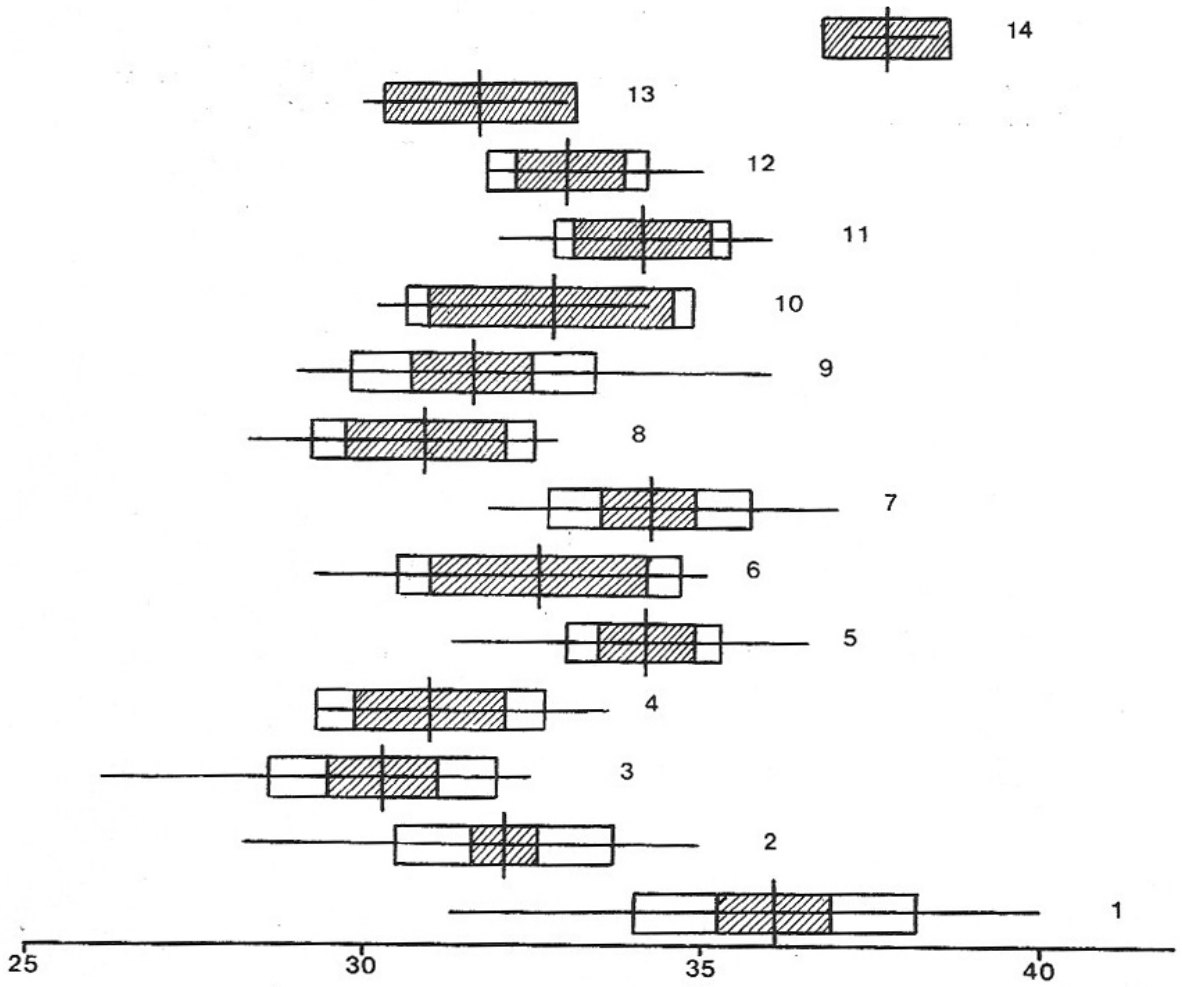

FIGURE 16 — Length of the hindlegs in males.

Isla de Nitge.

Material examined: 66 specimens, 42 ♂♂, 15 ♀♀ and 4 juveniles.

Males: Central dorsal region of a uniform browny green or with some black markings. Occasionally, the black dorsal markings almost form

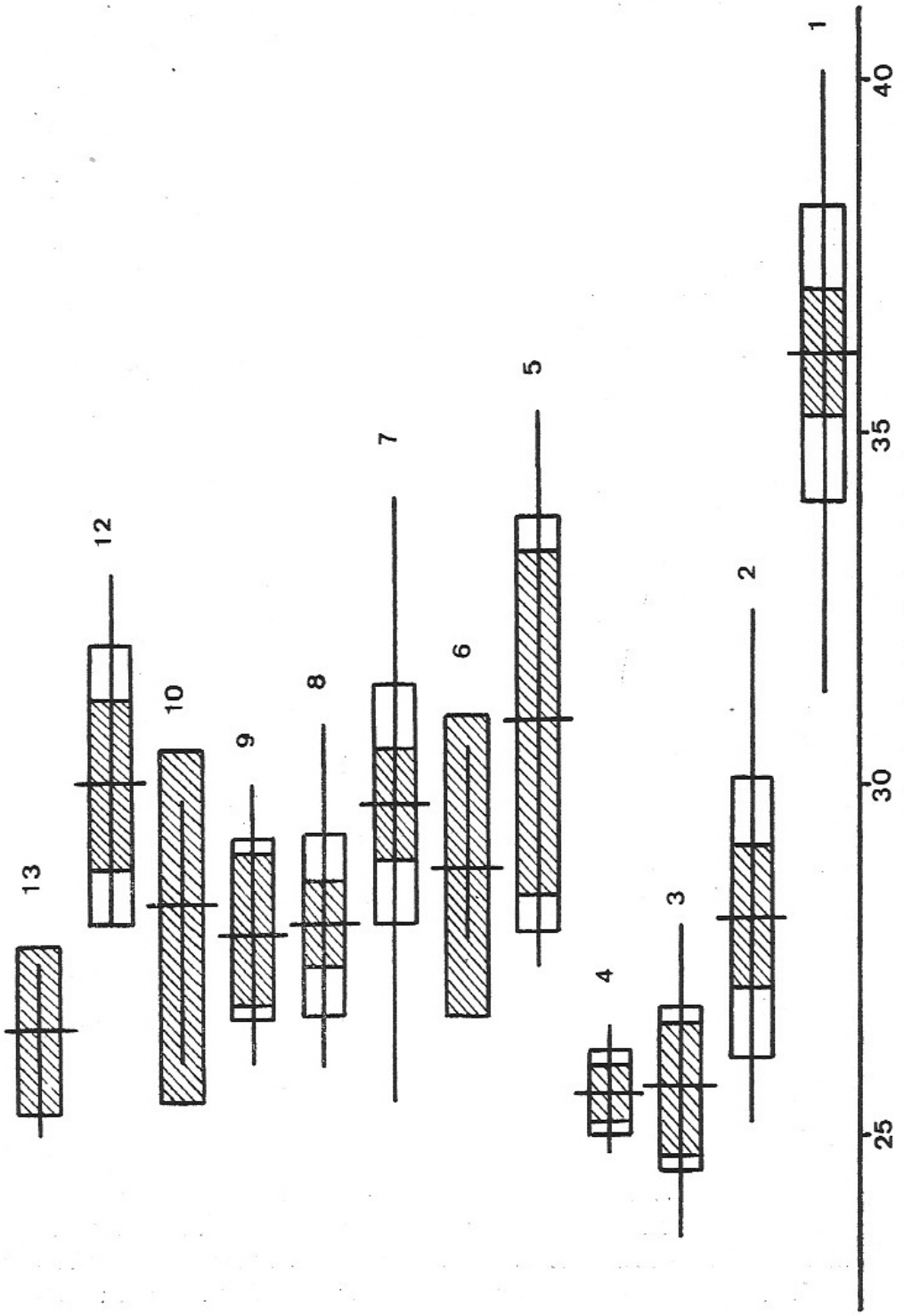

FIGURE 17 — Length of the hindlegs in females.

longitudinal lines in 4 dorsolateral stripes. In a single specimen only, green dorsolateral lines, rather conspicuous on the anterior third of the trunk, may be observed. Sides dull reddish with widespread black markings. Occasionally with blue or yellowish markings. Blue ocelli on the latter half of the outermost two rows of ventral scales, the remaining specimens have greyish blue shades. Seven specimens show a uniform very dark «concolor» type design. Three specimens show a greenish tinge on the anterior half of the back, the rest of the back is basically a very dark browny green. In 10 specimens, the back of the gular zone is rather rusty coloured and in the remaining specimens blue.

Females: Dorsal areas the same as in the males, as the case of the costal parts. Ventral zones are also similar with some blackish speckling on the outermost scales.

Juveniles: The same design as the females, also with rust-coloured ventral parts.

Biometry and folidosis in tables 3 and 4.

Isla Gran Addaya.

Material examined: 31 specimens, 20 ♂♂, 8 ♀♀ and 3 juveniles. A fairly robust small population. Neck rather thicker than head.

Males: Dark greenish back with black speckling, very dark brown costal areas also speckled with black. Dark brown and black pileus. Ventral area greyish with some greenish shades, in outermost ventral scales, there are blackish markings and well defined blue ocelli on the posterior two thirds of the trunk. Gular zone strongly marked with a very dull brown in five specimens and almost inexistent in another two. Blackish gular markings only observed on one specimen.

Females: Similar in colouring to the males. In five of the specimens two fairly pronounced greenish lines may be observed in the dorsolateral-central region. In three females, a very unmarked gular zone, light grey in colour may be observed.

Juveniles: Similar to females, in two specimens greenish dorsolateral lines also appear.

Biometry and folidosis in tables 5 and 6.

Isla Petita Addaya.

Material examined: 35 specimens, 12 ♂♂, 9 ♀♀ and 14 juveniles.

Males: Dark greenish back somewhat marked in brown and black, one specimen with olive-green dorsolateral areas and a fairly darkened vertebral zone. Brownish costal areas marked with black, greyish gular region, not

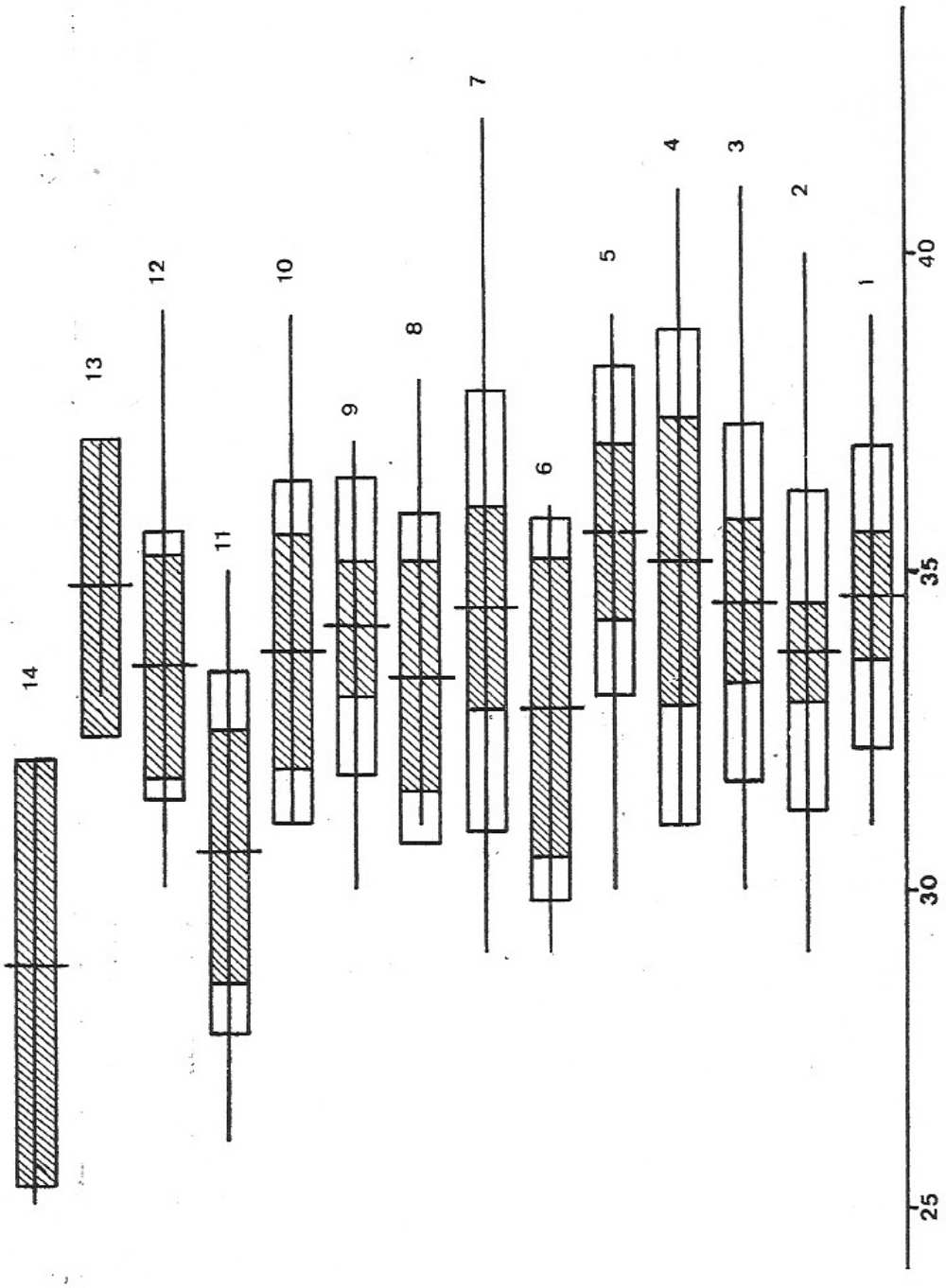

FIGURE 18 — Gularia of the males.

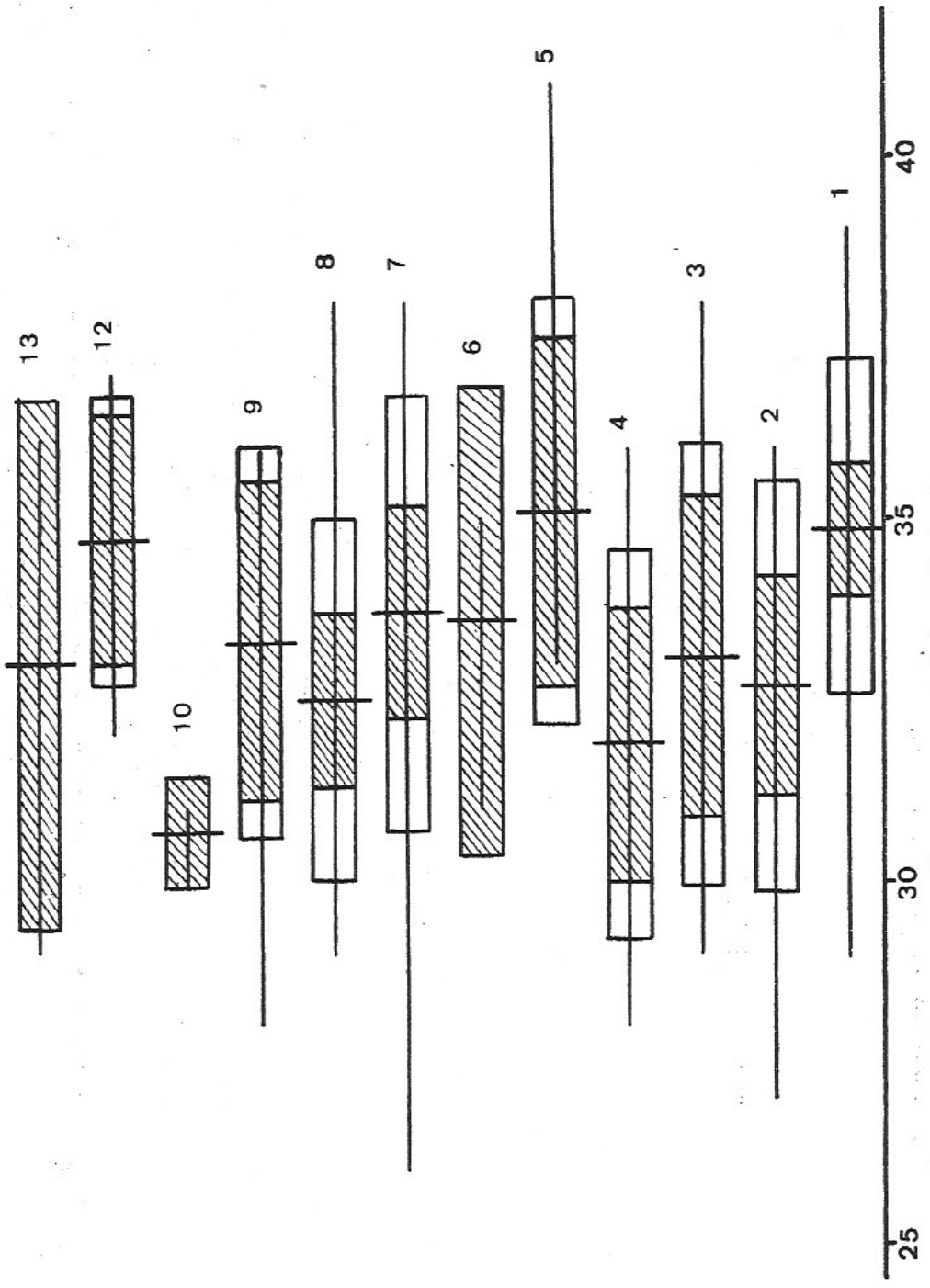

FIGURE 19 — Gularia of the females.

very marked. In everything else, the colouring is very similar to that described from specimens of Gran Addaya.

Females: Similar to males. Gular region shows light grey shades which are even less apparent than in the males. A small not very robust population. Neck somewhat thicker than the head.

Biometry and folidosis: tables 7 and 8.

Isla de Hospital.

Material examined: 38 specimens, 15 ♂♂, 7 ♀♀ and 16 juveniles.

Population with large body size, fairly robust.

Males: In seven of the specimens the back has brown-olive shades, while in another three there is a not very pronounced but visible vertebral line. In a further two specimens, this line is very dull but double. Dorsolateral parts with some rusty tinges. Costal areas marked with brown and black. Pileus brown with some blackish markings. Clear tendency to melanism in two specimens with blackish and some blueish shades on the back and costal areas. One of these individuals has a reticulated blackish grey gular zone. Grey central zone with some blackish ocelli on the outermost rows of scales. Gular region with numerous grey markings which are blackened in three specimens. In six individuals the ventral area has disperse rusty-orangey shades.

Biometry and folidosis in tables 9 and 10.

Isla de Colom.

Material examined: 43 specimens, 20 ♂♂, 19 ♀♀ and 4 juveniles.

Population with a medium body size, fairly robust.

Males: Dark brown back somewhat marked with black. Very unconspicuous design in all specimens studied, with one exception which has a double vertebral line. Pileus practically black. Costal areas more marked with black than back. Dirty white gular region profusely marked with blackish grey in six specimens. Dark grey spots on all the ventral scales in three individuals which also show black lines crossing the submaxillary scales.

Females: Similar pattern to the males. Gular region marked with grey in 12 specimens. In two individuals blackish spots may also be observed on all the ventral scales.

Juveniles: Similar pattern to the females.

Biometry and folidosis in tables 11 and 12.

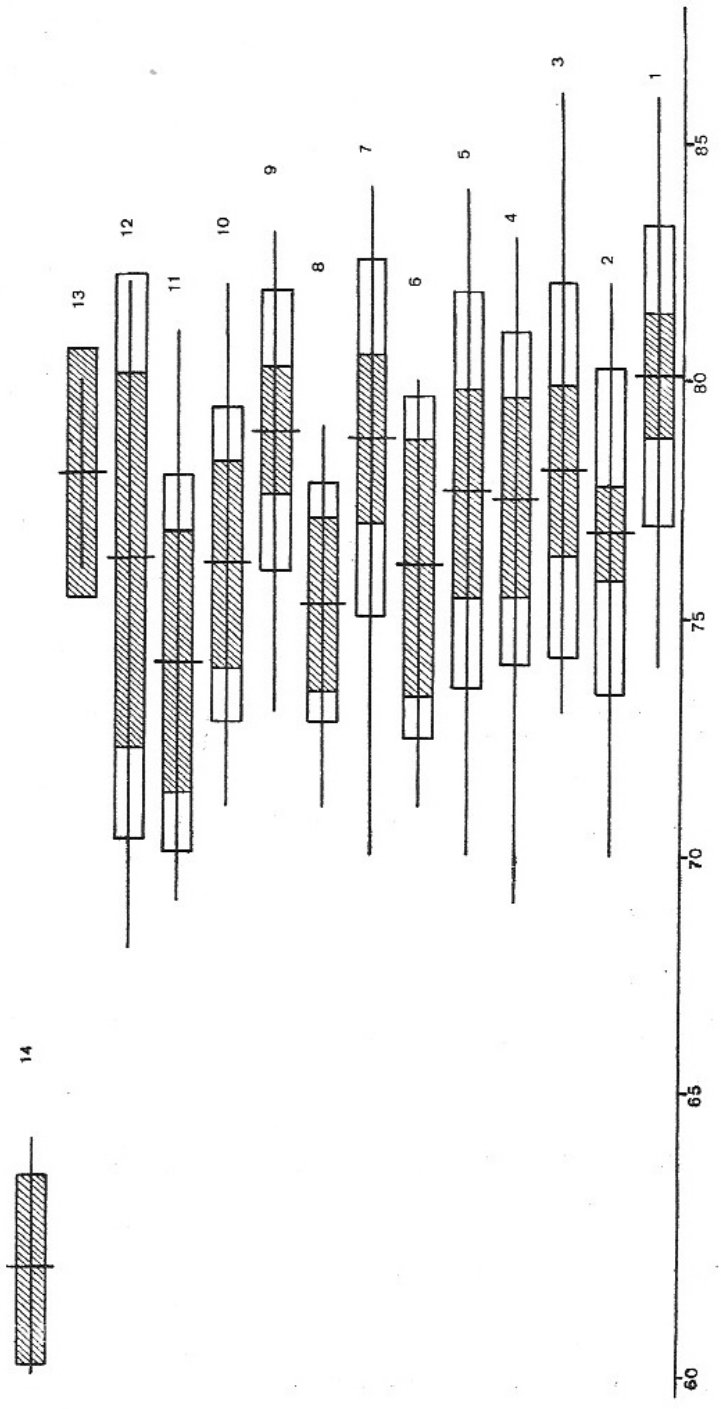

FIGURE 20 — Dorsalia of the males.

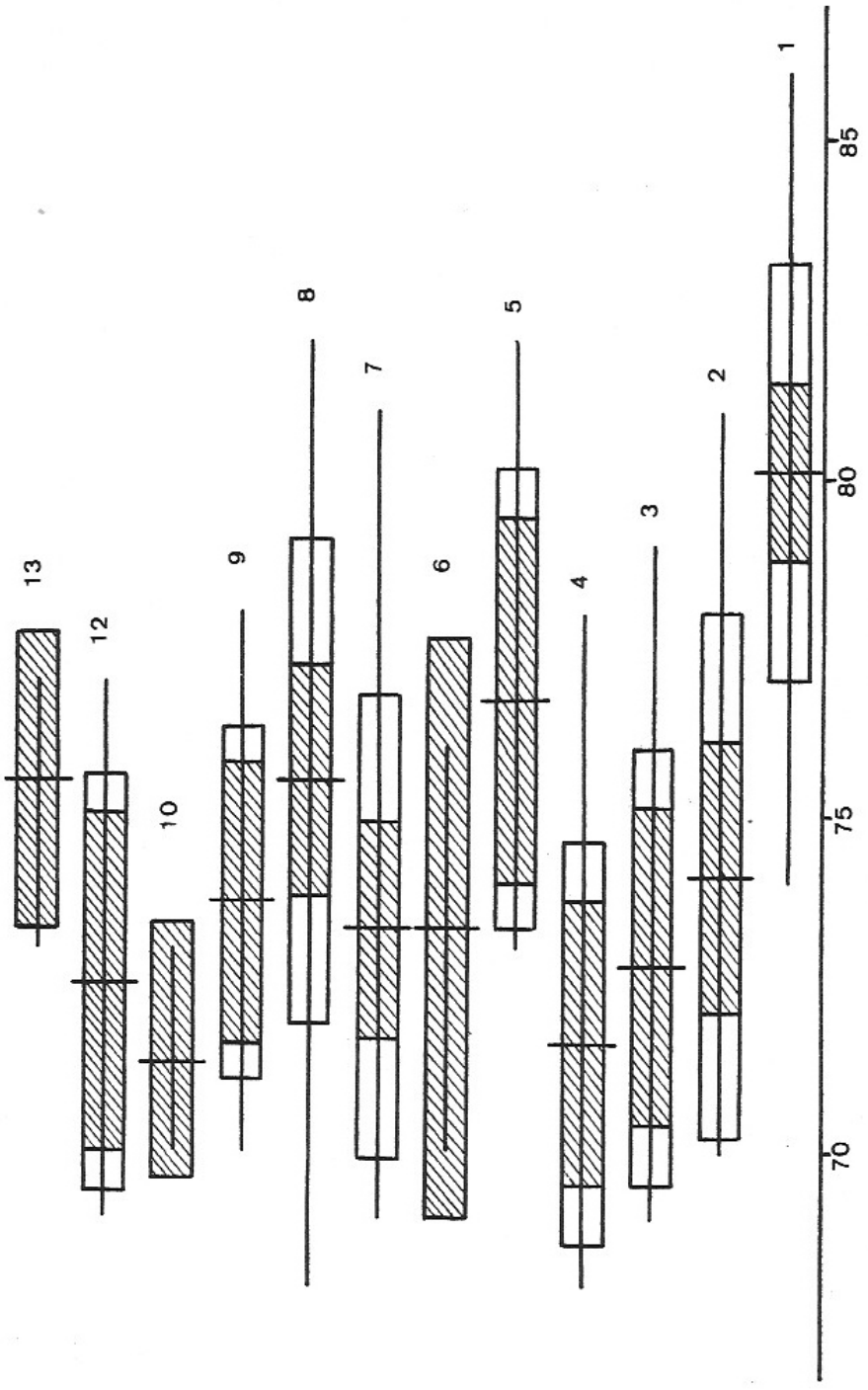

FIGURE 21 — Dorsalia of the females.

Isla Sargantana.

Material examined: 63 specimens, 9 ♂♂, 18 ♀♀ and 36 juveniles.

Population with small body size but very robust. Neck somewhat thicker than head.

Males: Back brown. In five specimens well defined dorsolateral and central lines may be observed. Two specimens show a uniform brown dorsal

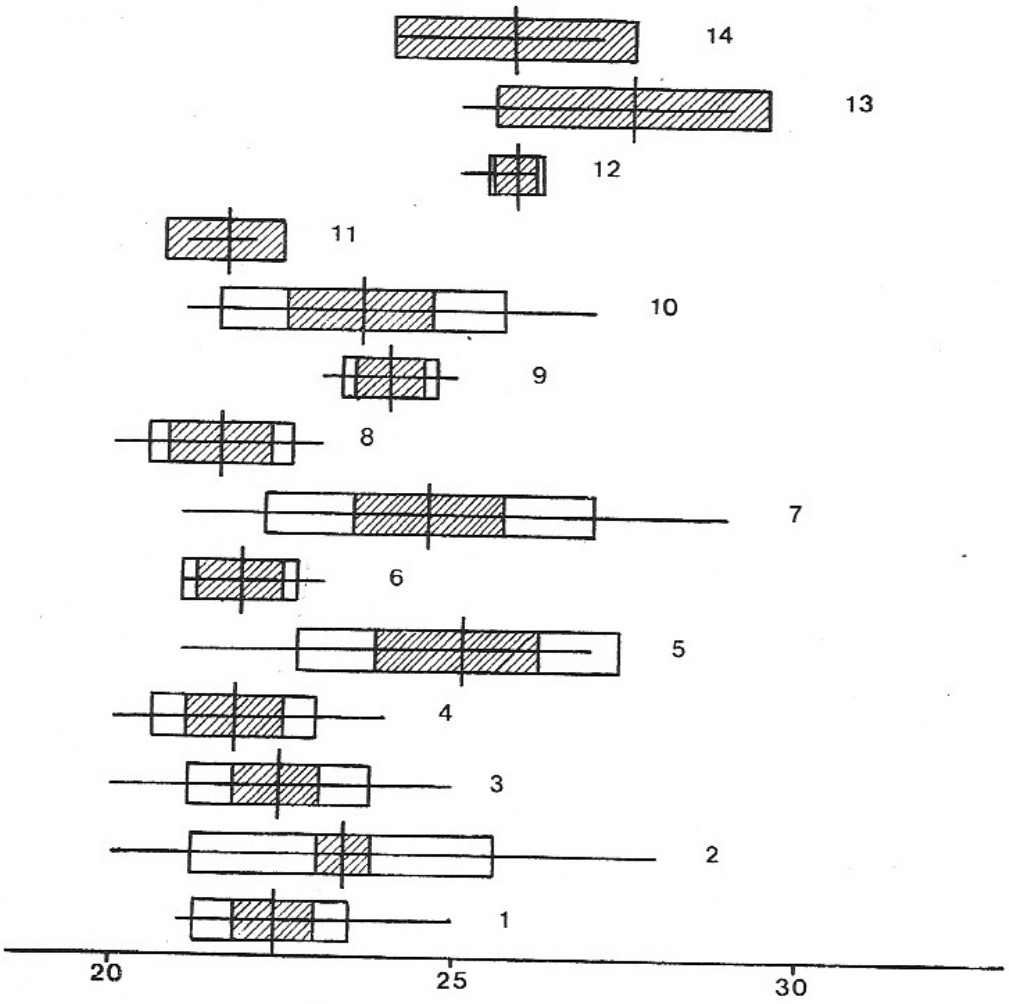

FIGURE 22 — Ventralia of the males.

colouring without lines and only marked with black at rear end. Dirty white gular region marked with light grey, except in one individual. Dirty white ventral zone with blackish spots in only one specimen.

Females: Similar to the males but 14 of the females show well defined dorsolateral and central lines; between these lines other less well defined lines of unconnected black dots.

Juveniles: Similar to the adults. Nine individuals show well defined dorsolateral lines. Only one specimen shows a gular zone very marked with black.

Biometry and folidosis: tables 13 and 14.

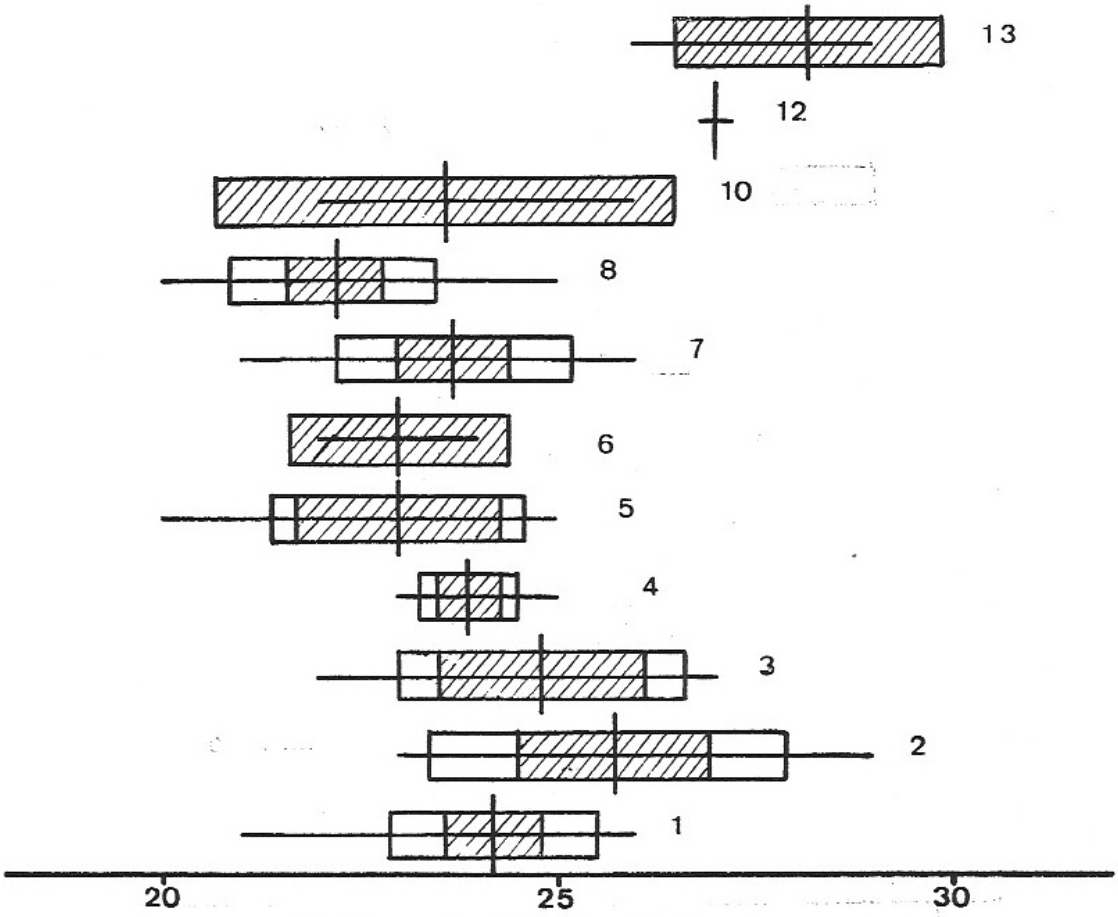

FIGURE 23 — Ventralia of the females.

Escull de Bledas.

Material examined: 19 specimens, 8 ♂♂, 3 ♀♀ and 8 juveniles.

Population of medium robustness and body size.

Males: Brown or olive-green back, seven specimens show a vertebral line formed by small black spots. Brown pileus marked with black. Gular

region grey shaded. In six specimens black spots on submaxillary scales may be observed. Blue ocelli on the outermost ventral scales.

Females: Greenish back with blueish-green dorsolateral lines. Similar pattern to the males.

Juveniles: Brown back. Costal areas marked with brown-greenish spots. Outermost ventral scales without blue ocelli.

Biometry and folidosis: tables 15 ans 16.

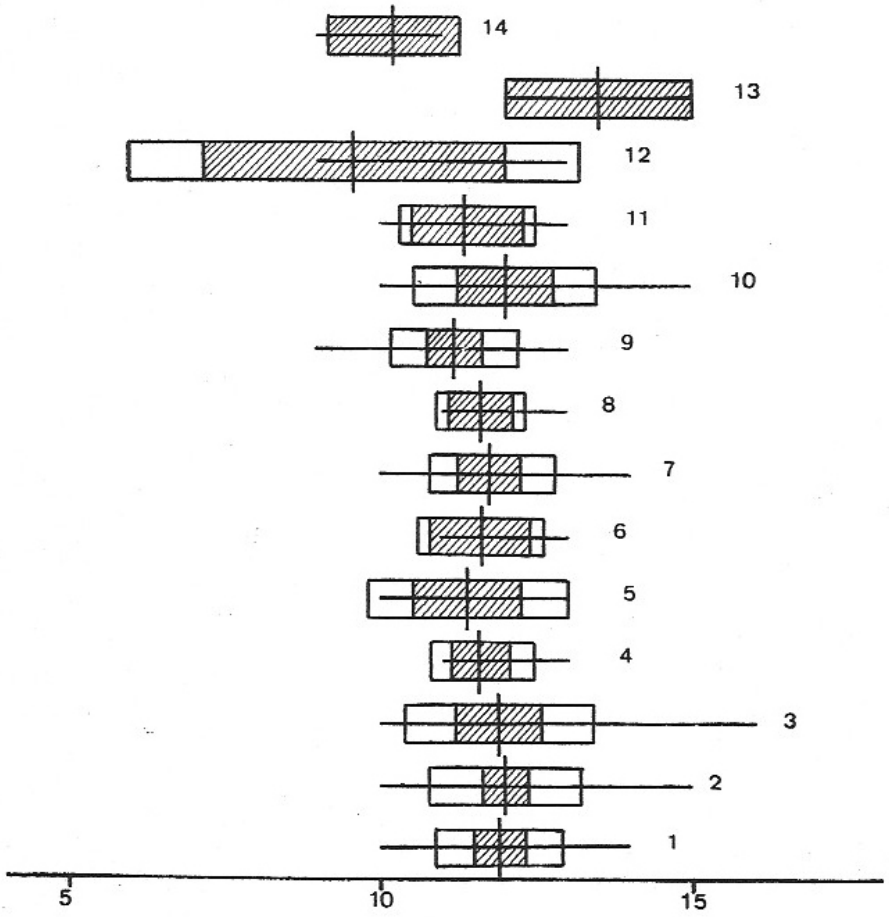

FIGURE 24 — Collaria of the males.

Islote de Sen Tosqueta.

Material examined: 27 specimens, 20 ♂♂ and 7 ♀♀.
Population with very small body size and neck thicker than head.

Males: Back brown and reticulated costal areas. Greenish and yellowish spots on the outermost ventral scales. Sky-blue ocelli and black spots on these ventral scales.

Females: Similar to the males but less reticulated. Both in males and females ventral parts are reddish except in one specimen with white ventral area.

Biometry and folidosis: tables 17 and 18.

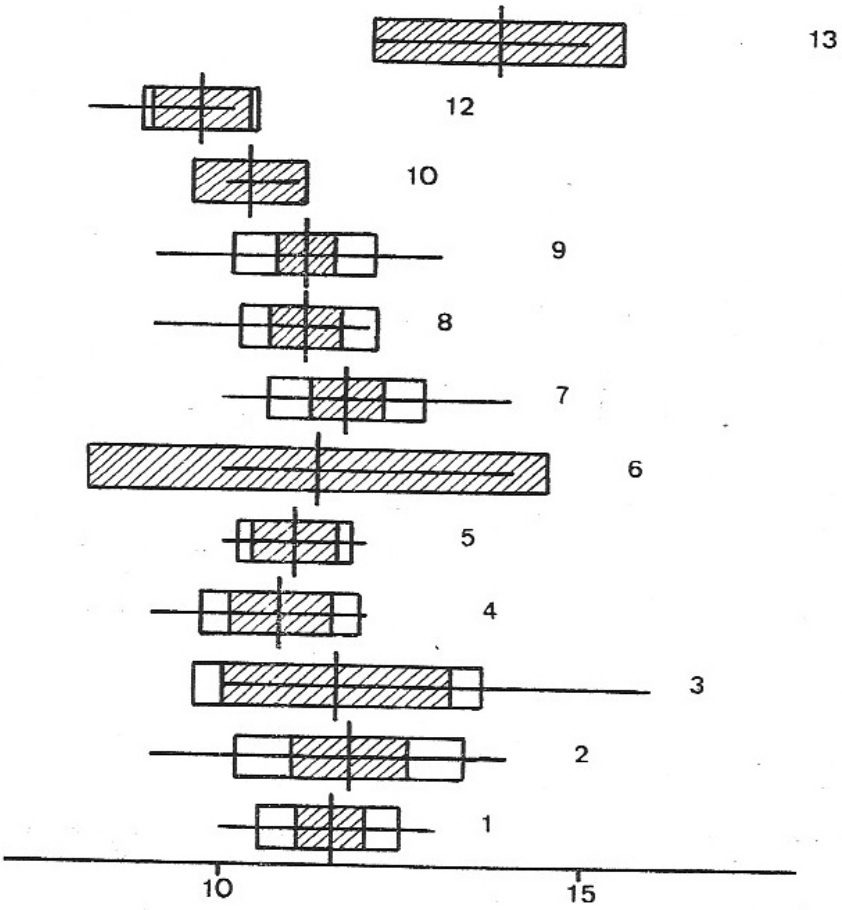

FIGURE 25 — Collaria of the females.

Islote de Rovells.

Material examined: 15 specimens, 10 ♂♂, 3 ♀♀ and 2 juveniles.

Population of medium body size, very robust.

Males: Back very dark green with a vertebral zone marked with black which, in two specimens, forms double vertebral lines. Costal areas mottled

in dark green. In three individuals brown shades predominate on the back. Gular region marked with grey in half of the specimens and dirty white in the others. Blackish lines crossing submaxillary scales in three cases.

Females: Similar to the males though with quite apparent greenish dorsolateral lines. Only one specimen with the gular region marked with grey

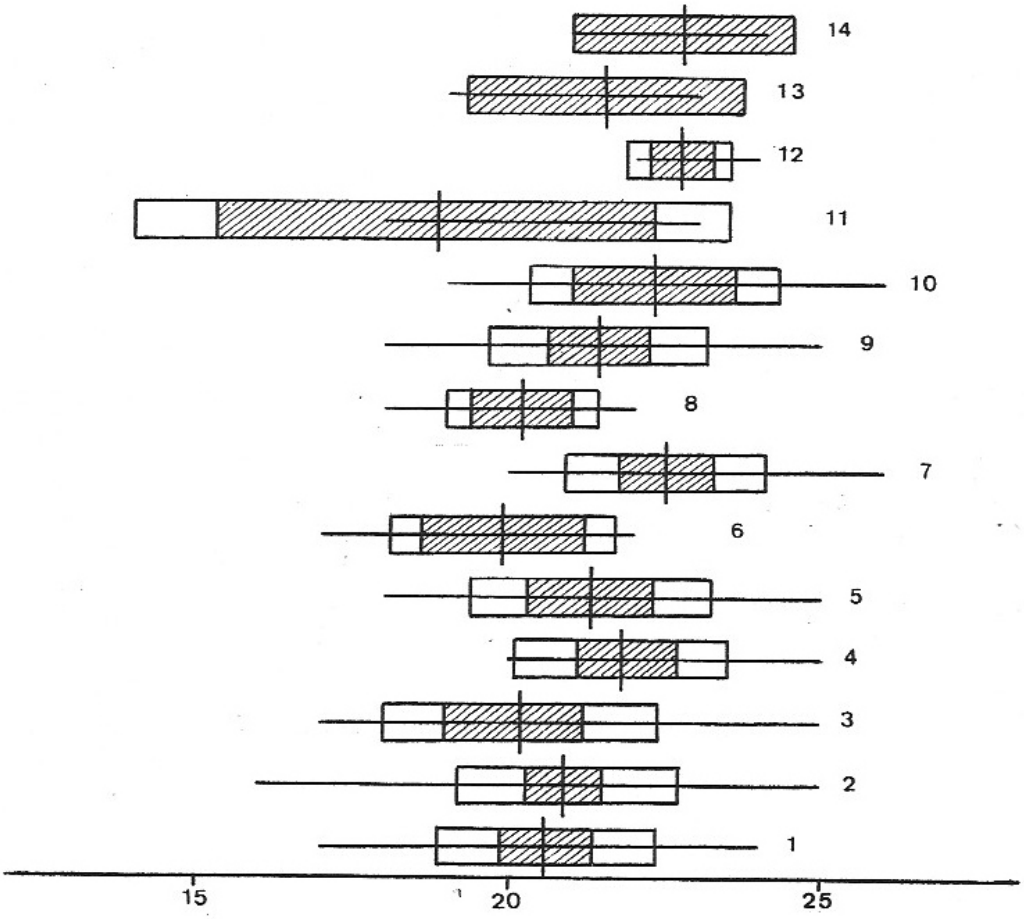

FIGURE 26 — Femoral pores of the males.

while another has black marks on the outermost ventral scales. The only case of its kind in the specimens studied.

Juveniles: Pattern and colouring similar to that described for females. Tail reddish brown on the anterior third both on ventral and dorsal surfaces.

Biometry and folidosis: tables 19 and 20.

Islote de Porros (Bay of Fornells).

Material examined: 19 specimens, 9 ♂♂, 1 ♀ and 9 juveniles.

Population with large body size, very robust.

Males: Back very dark olive green with blackish not very pronounced double vertebral lines. Pileus dark brown and very marked with black. Costal areas reticulared in blue green over a black background. Ventral

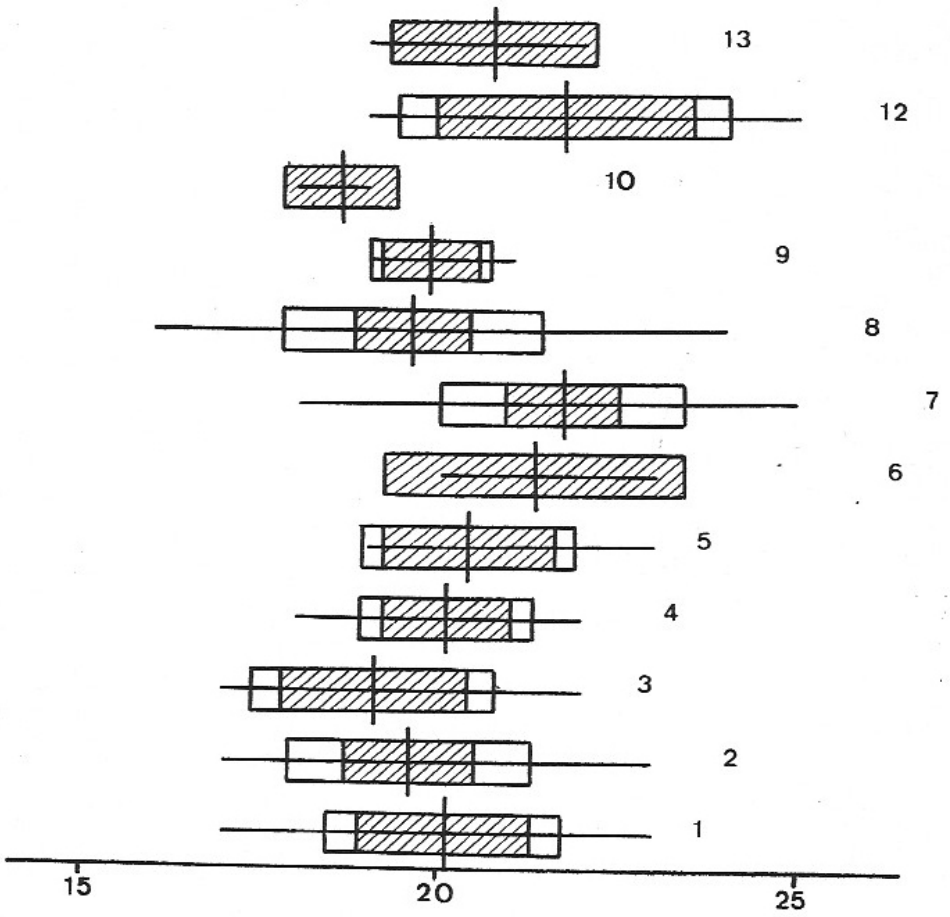

FIGURE 27 — Femoral pores of the females.

zone dirty white, in two of the specimens studied very marked in black all over the surface. Black well defined lines crossing the submaxillary scales.

Females: The only specimen examined presents a greeny brown back with well visible green dorsolateral lines and also double black vertebral lines. In the rest it is similar to the males described.

Juveniles: Similar to the adults. Well-defined dorsolateral and vertebral lines.

Biometry and folidosis: table 21.

Esculls de Codrell I and II.

Material examined: 17 specimens, 10 ♂♂ and 7 ♀♀.

Population of smal body size. Neck wider than head.

Males: Back dark brown. Visible dorsolateral lines somewhat more lighter than background. Vertebral line absent. Not very pronounced

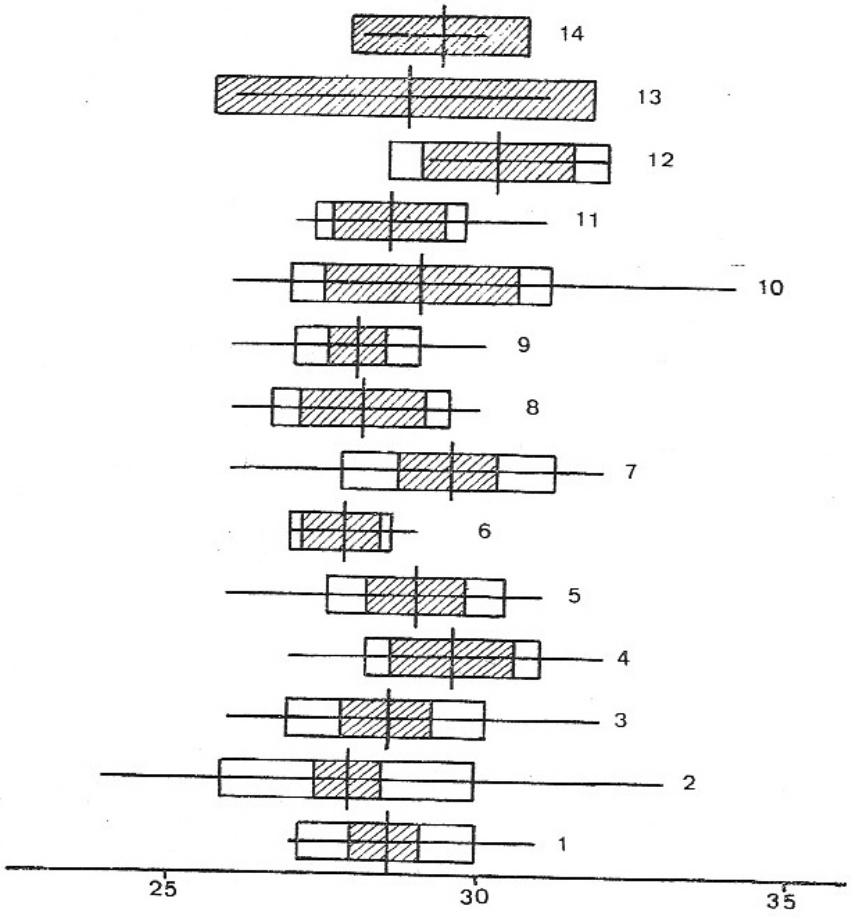

FIGURE 28 — Subdigital lamellae of the males.

pattern. Ventral and gular zones white with dark grey speckling on both. Submaxillary scales without marks.

Females: Pattern and colouring similar to males.

Biometry and folidosis in tables 22 and 23.

Islote de Carbonera.

Material examined: 8 specimens, 4 ♂♂ and 4 ♀♀.

Population of medium body size. Rounded form with neck slightly wider than head.

Males: Back dark olive green. Conspicuous pattern but broken by discontinuous lines lighter in colour than background. Ventral zone light blue with black spots and blue ocelli on the outermost ventral scales.

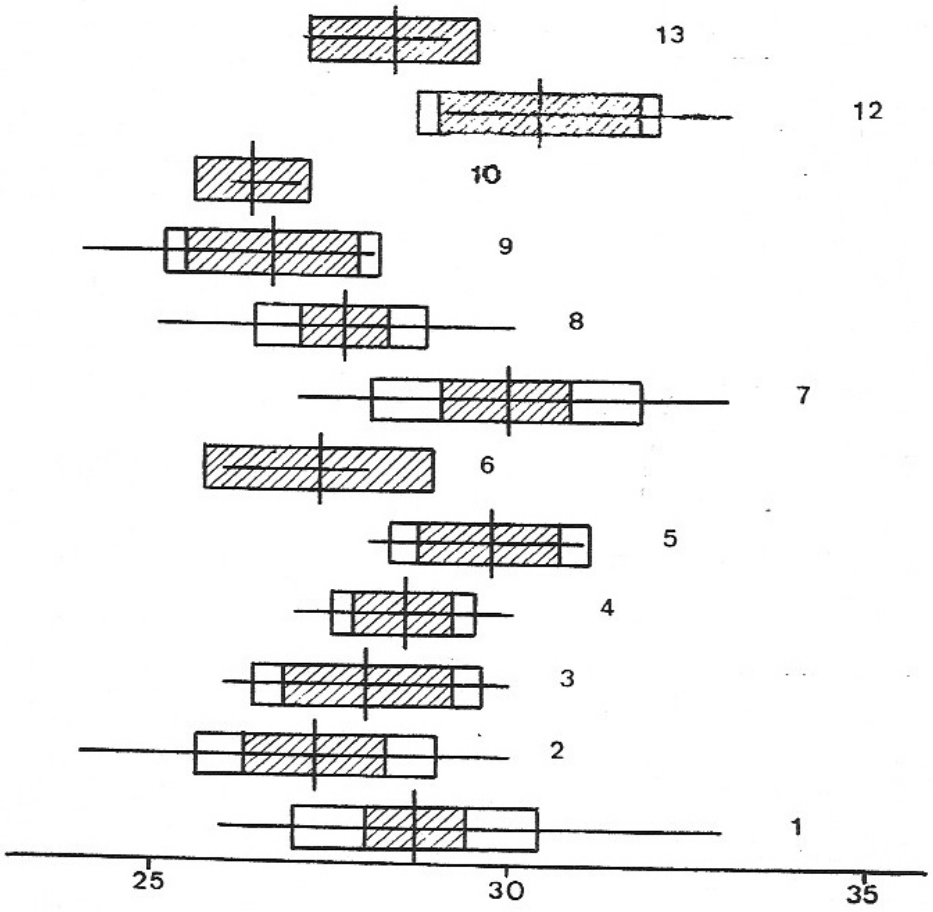

FIGURE 29 — Subdigital lamellae of the females.

Females: Similar to males though dorsal parts are browner. Well-defined narrow dorsolateral lines.

Biometry and folidosis: tables 24 and 25.

Isla de las Ratas.

Material examined: 4 specimens, all adults ♂♂.

Giant form with body much larger than in any of the other populations studied.

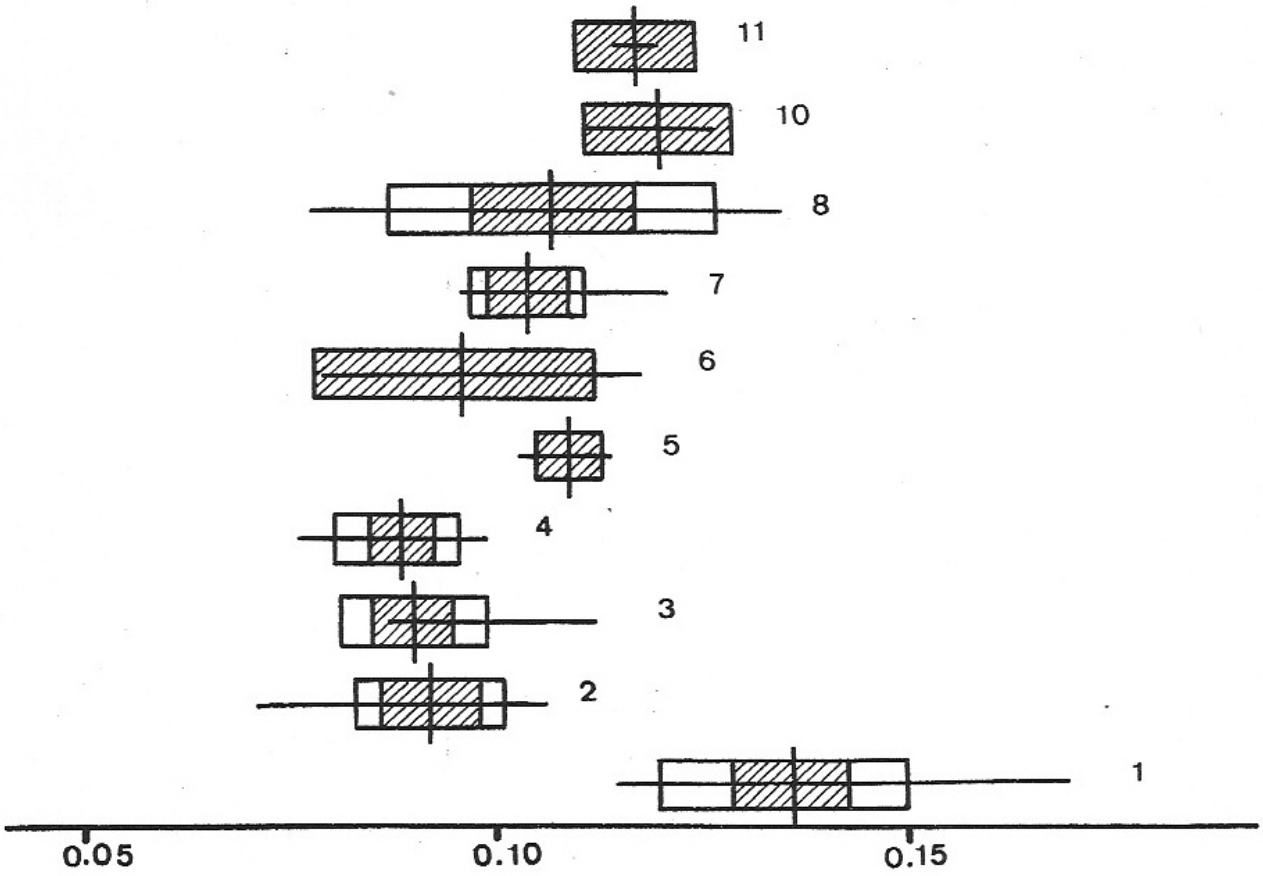

FIGURE 30 — Robustness of the males.

Back greenish brown with darker, rather blueish central zone. Vertebral line fragmented and double. Very faint dorsolateral markings. Pileus brown marked with black. Ventral zone dirty white with blue ocelli and black marks on outermost ventral scales.

Biometry and folidosis: table 26.

Values corresponding to A3 in table 27.

3.3. COMPARATIVE ANALYSIS.

3.3.1. *Analysis of variance and SKN test.*

Table 29 shows the results of the analysis of variance for each of the characters. There are statistically significant differences ($p < 0.001$) for all the characters in both sexes excepting the Collaria of the females, the Femoralia of the females, Lamellae of the males and the relative length of the Pileus (LP/WP) of the females.

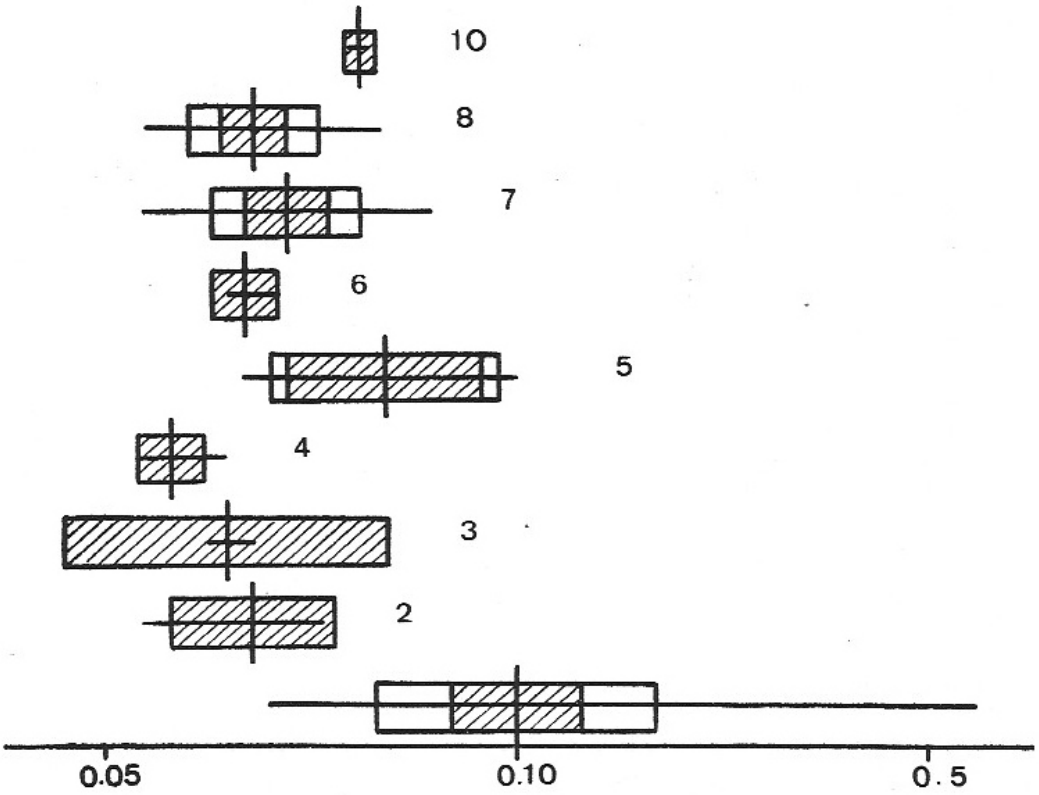

FIGURE 31 — Robustness of the females.

The greatest percentages between groups (populations) are seen in body length (SVL) and robustness. The «a posteriori» SNK tests are less sensitive to differences than the ANOVA and it thus logical that some characters should not show significant differences in their means, in spite of having been detected previously in the ANOVA. Figures 36, 37, 38, 39 and 40 summarize the results of these tests.

Males.

Body length (SVL). Significant differences may be seen between specimens from the Isla de Ratas and the other sites, with the exception of Hospital. Moreover, the males of Hospital are also significantly larger than in any other population excepting Porros de Fornells. Finally, the males from Colom are significantly larger than those from Sen Tosqueta, Codrell, Gran Addaya, Nitge, Sargantana and Petita Addaya.

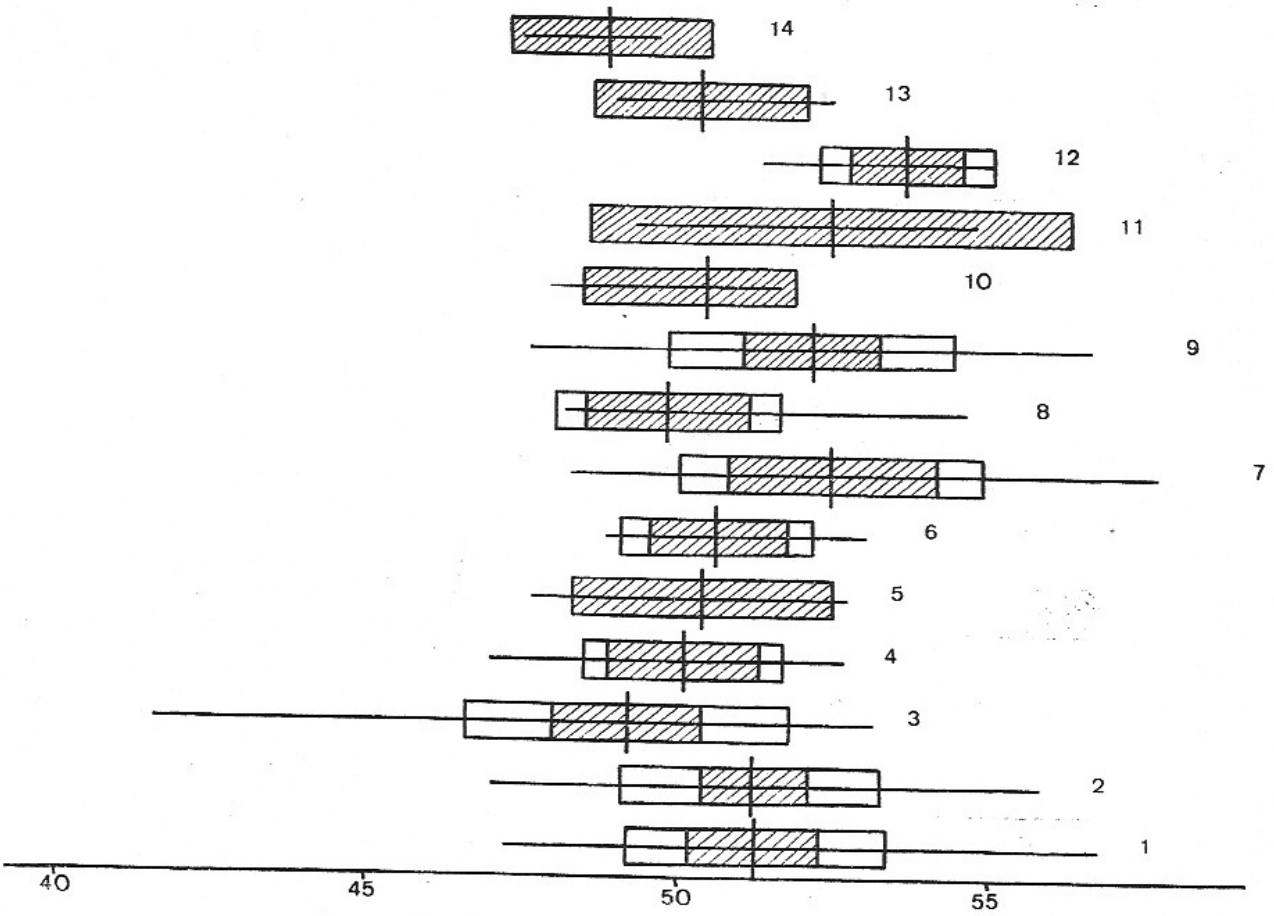

FIGURE 32 — Relative length of the hindlegs of the males.

Gularia (see figure 36). Significant differences were only detected in the population of the Isla de Ratas, with lower mean values and the islets of Petita Addaya and Hospital, and also between these latter and the islet Porros de Fornells.

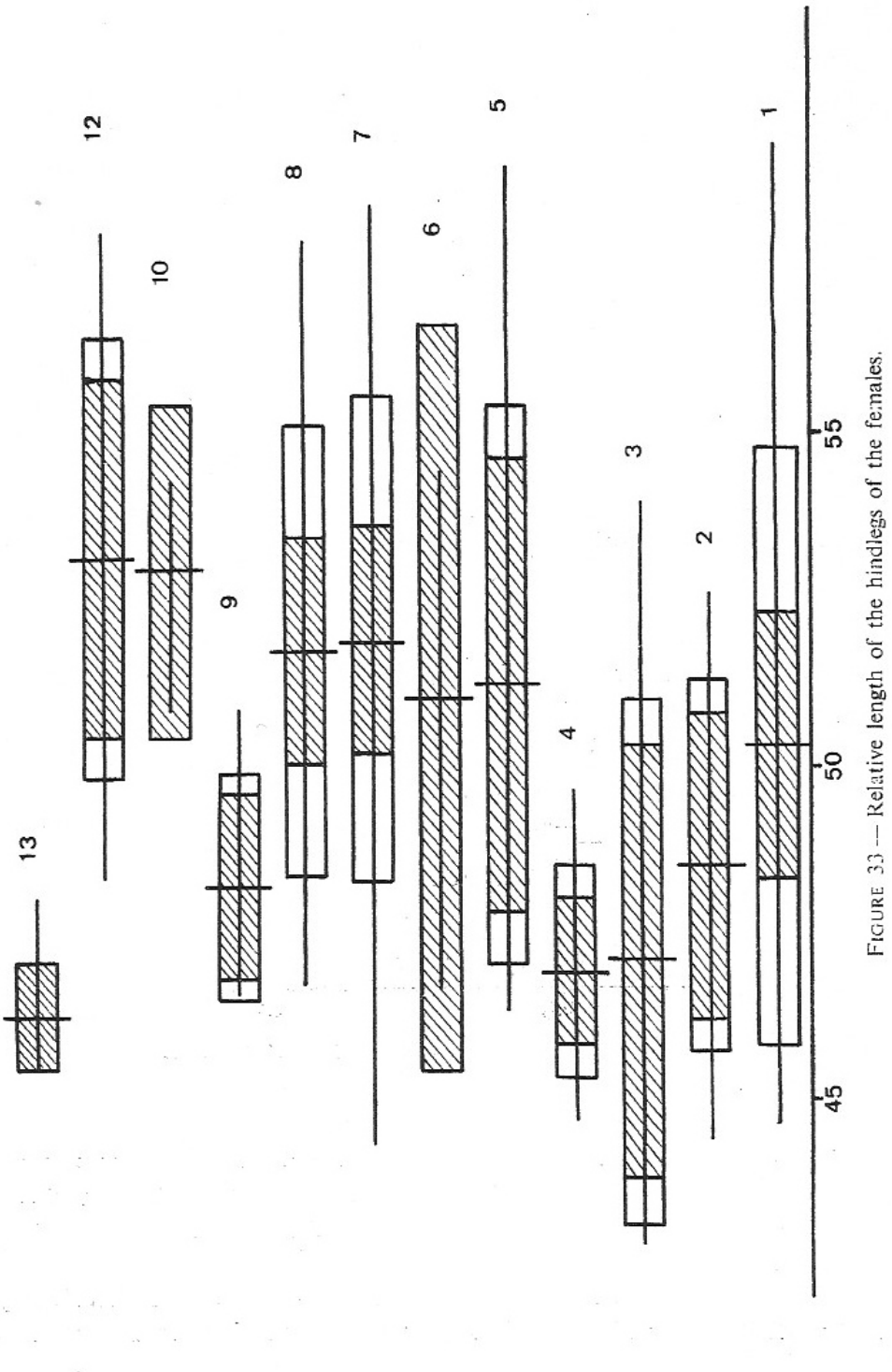

FIGURE 33 — Relative length of the hindlegs of the females.

Dorsalia. Specimens from the Isla de Ratas show a significantly smaller dorsalia than any other population. In this sense, differences may be seen between Porros de Fornells and the three islets with the highest values: Aire, Sen Tosqueta and Colom. Finally, significant differences appear between Sargantana and Aire on one hand, and Nitge and Aire, on the other (figure 10).

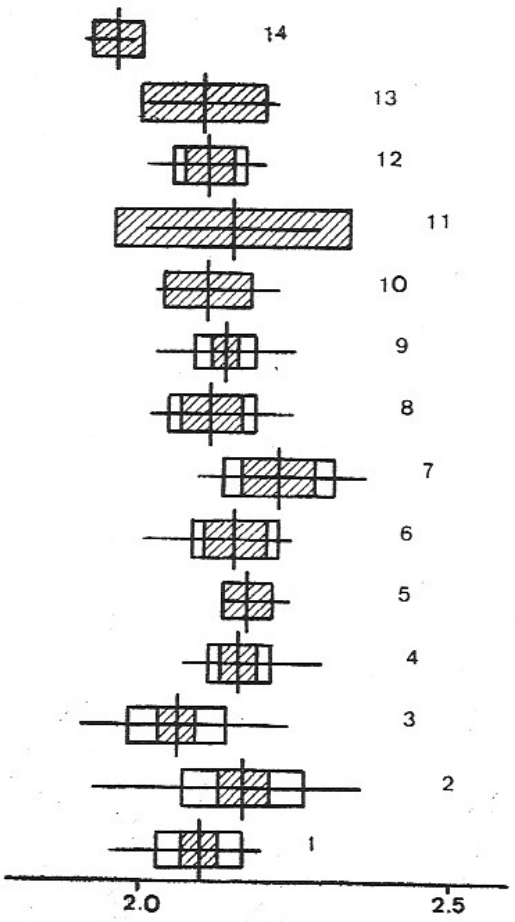

FIGURE 34 — Relative length of the Pileus of the males.

Ventralia. Figure 37 shows the numerous significant differences found among males for this character. The lowest values correspond to Sargantana, Porros de Fornells and Petita Addaya, the greatest to Carbonera, Codrell and Ratas.

Collaria. The lowest values are found in Escull de Codrell, significantly different to the remaining populations, excepting the Isla de Ratas. The

differences between the means of the other islets are much smaller and are not significant (figure 37).

Femoralia. According to the SNK test there are no significant differences, though these did appear in the analysis of the variance, as explained above.

Lamellae. Analysis of variance did not detect any differences such that in this case the SNK test was not performed.

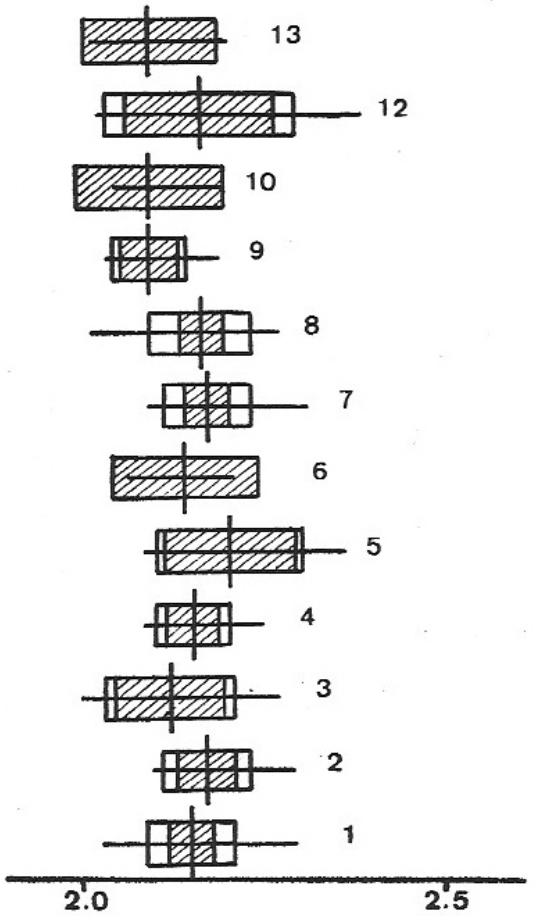

FIGURE 35 — Relative length of the Pileus of the females.

Robustness. No significant differences exist between the means. The highest indices correspond to Nitge and the Addaya islets, and the lowest to the islets Aire and Rovells.

Relative hindleg length (RHL). Significant differences may be observed between the lowest values of Nitge and the islets of Aire Sen Tosqueta, Porros

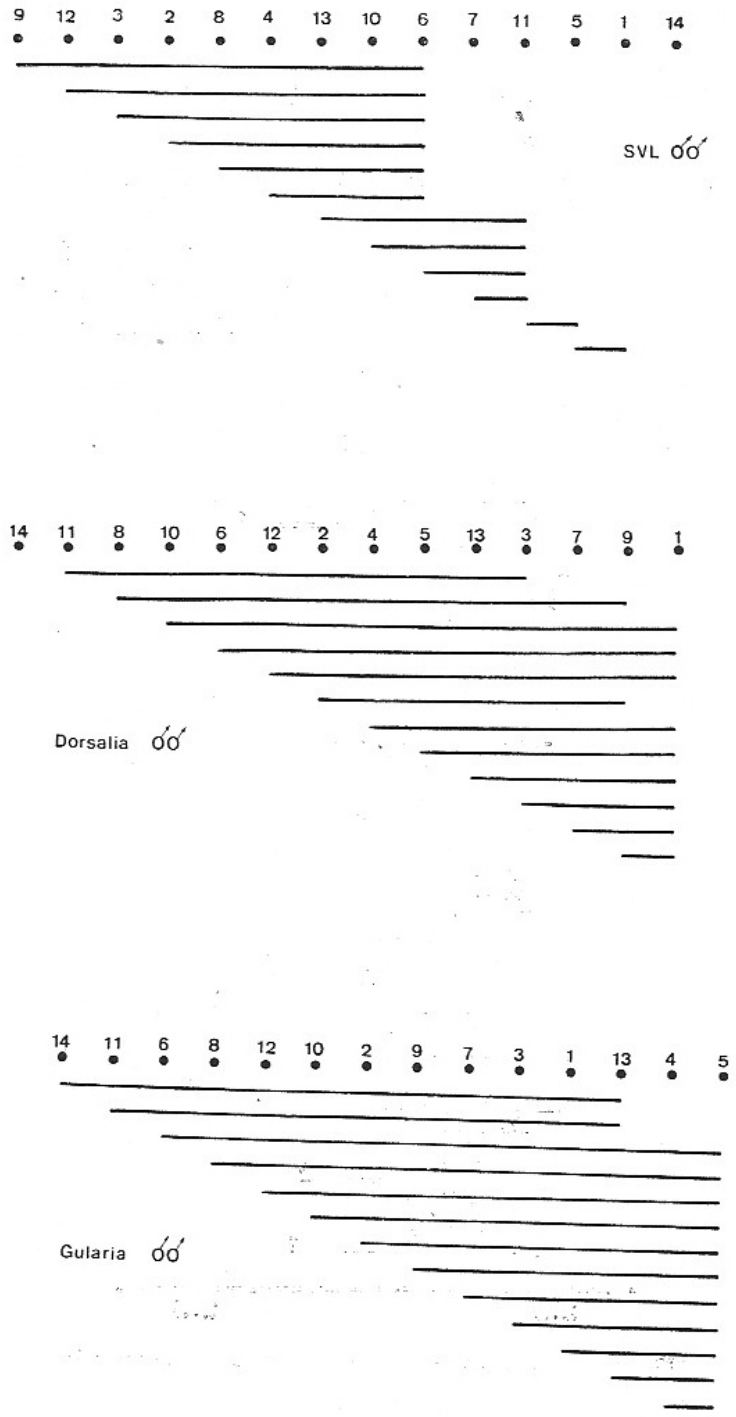

FIGURE 36 — Levels of significance in the SNK test for SVL, Dorsalia and Gularia in males. The numbers indicate the populations as follows: 1. Aire, 2. Nitge, 3. Gran Addaya, 4. Petita Addaya, 5. Hospital, 6. Escull de Bledas, 7. Colom, 8. Sargantana, 9. Sen Tosqueta, 10. Rovells, 11. Porros (Fornells), 12. Esculls de Codrell I and II, 13. Carbonera, 14. Ratas. In the females the situation is identical up to 10, inclusive; 11 corresponds to Esculls de Codrell I and II and 12 to Carbonera. The populations are ordered from left to right, from those with the lowest values to those with the highest. The horizontal lines join a given population from the right with all those with statistically significant differences ($p < 0.05$) in their means with that population (see SOKAL & ROHLF, 1969).

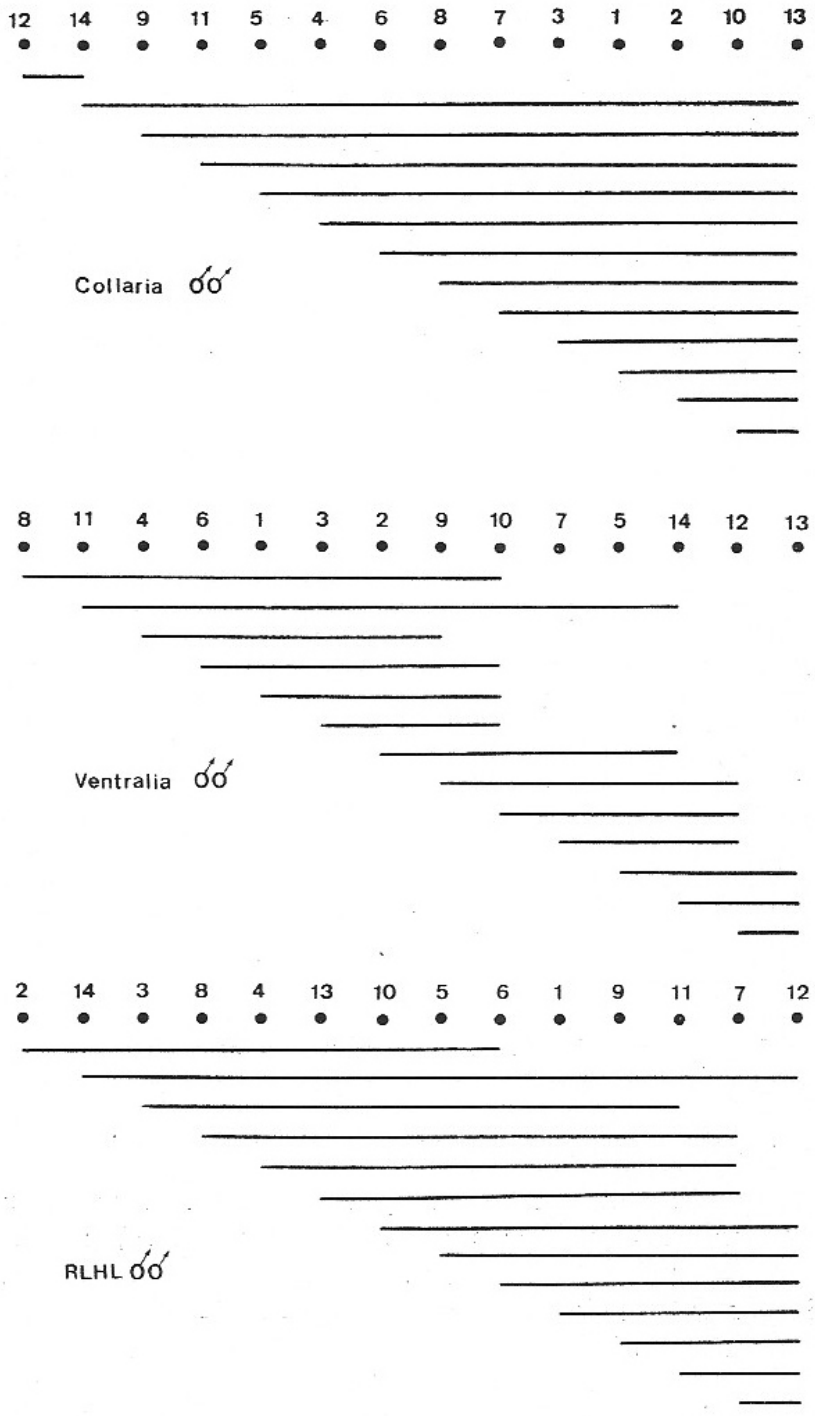

FIGURE 37. SNK test for Collaria, Ventralia and relative length of the hindlegs in males.

de Fornellos, Colom and Codrell. These latter two islets also show significant differences compared with values found for Gran Addaya. Lastly, Escull de Codrell shows significant differences with respect to Sargantana, Petita Addaya and Carbonera (figure 37).

Relative length of the Pileus. (LP/WP). This shows the lowest mean on the isla de Ratas, and is significantly different from the rest of the populations. The following value in increasing order corresponds to the males of Gran Addaya which show significant differences with respect to the populations of Escull de Bledas, Petita Addaya, Hospital and Colom. Finally, the islet of Colom, exhibiting greatest length of the Pileus, also shows significant differences with Codrell, Rovells, Aire, Sargantana, Nitge and Sen Tosqueta (figure 38).

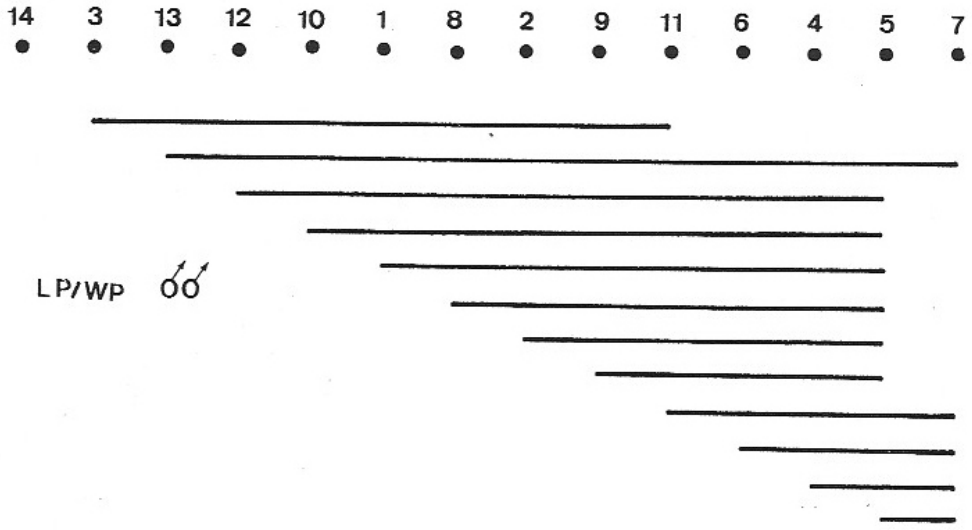

FIGURE 38 — SNK test for the relative length of the pileus in males.

Females.

SVL. The largest females correspond to the populations found on Aire and Hospital, which show significant differences with those of Sargantana, Gran Addaya, Petita Addaya, Nitge, Colom and Codrell in the former and with Sargantana, Gran Addaya and Petita Addaya in the latter case, respectively (figure 39).

Gularia. No differences were found in the «a posteriori» test, the smallest values corresponding to the islet of Rovells and the greatest to the isla del Rey or Hospital.

Dorsalia. Significant differences may only be observed between the population of the Isla del Aire, with the highest values, and the remaining islets (figure 39).

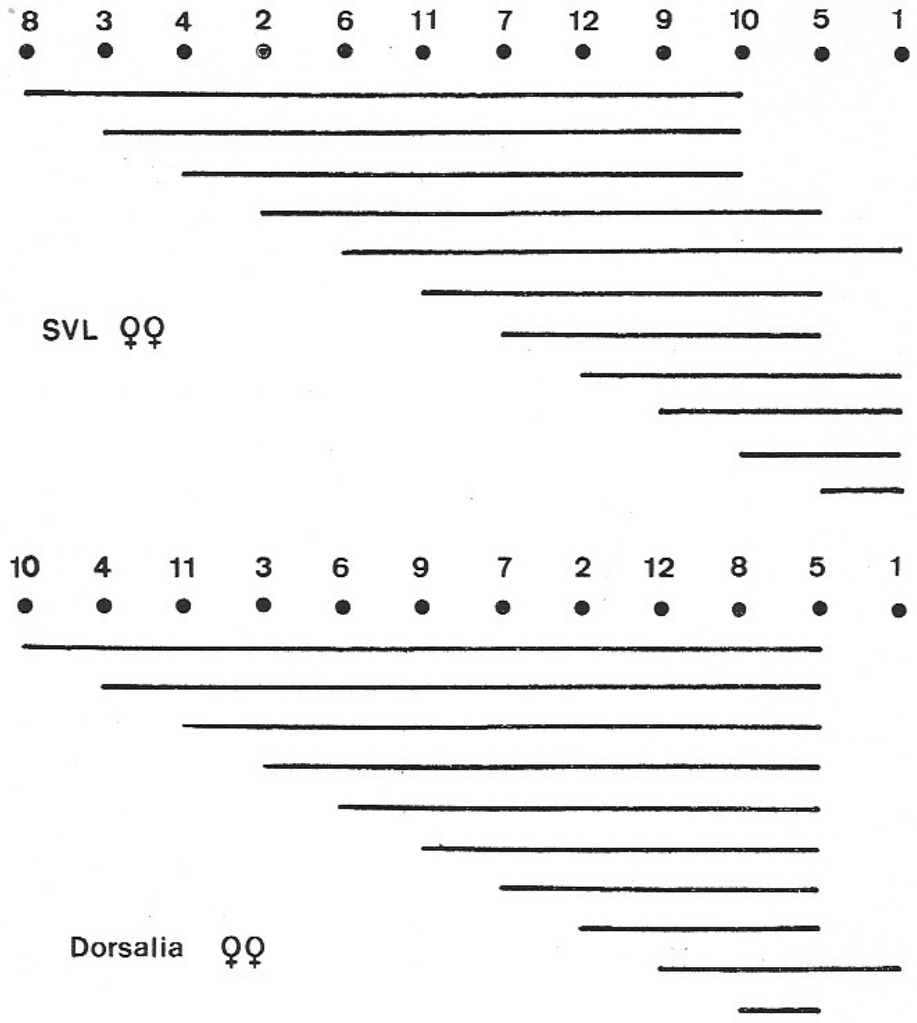

FIGURE 39 — SNK test for the SVL and Dorsalia in females.

Ventralia. The highest mean corresponds to the islet of Carbonera which exhibits significant differences with the other remaining populations except that of the Isla del Aire (figure 40).

Collaria. The analysis of the variance did not show any significant results such that the SNK test was not carried out.

Femoralia. As in the case of the Collaria a further analysis was not carried out after the initial ANOVA results.

Lamellae. The greatest number of subdigital scales may be observed in the females of the Rovells and Sen Tosqueta populations, which show

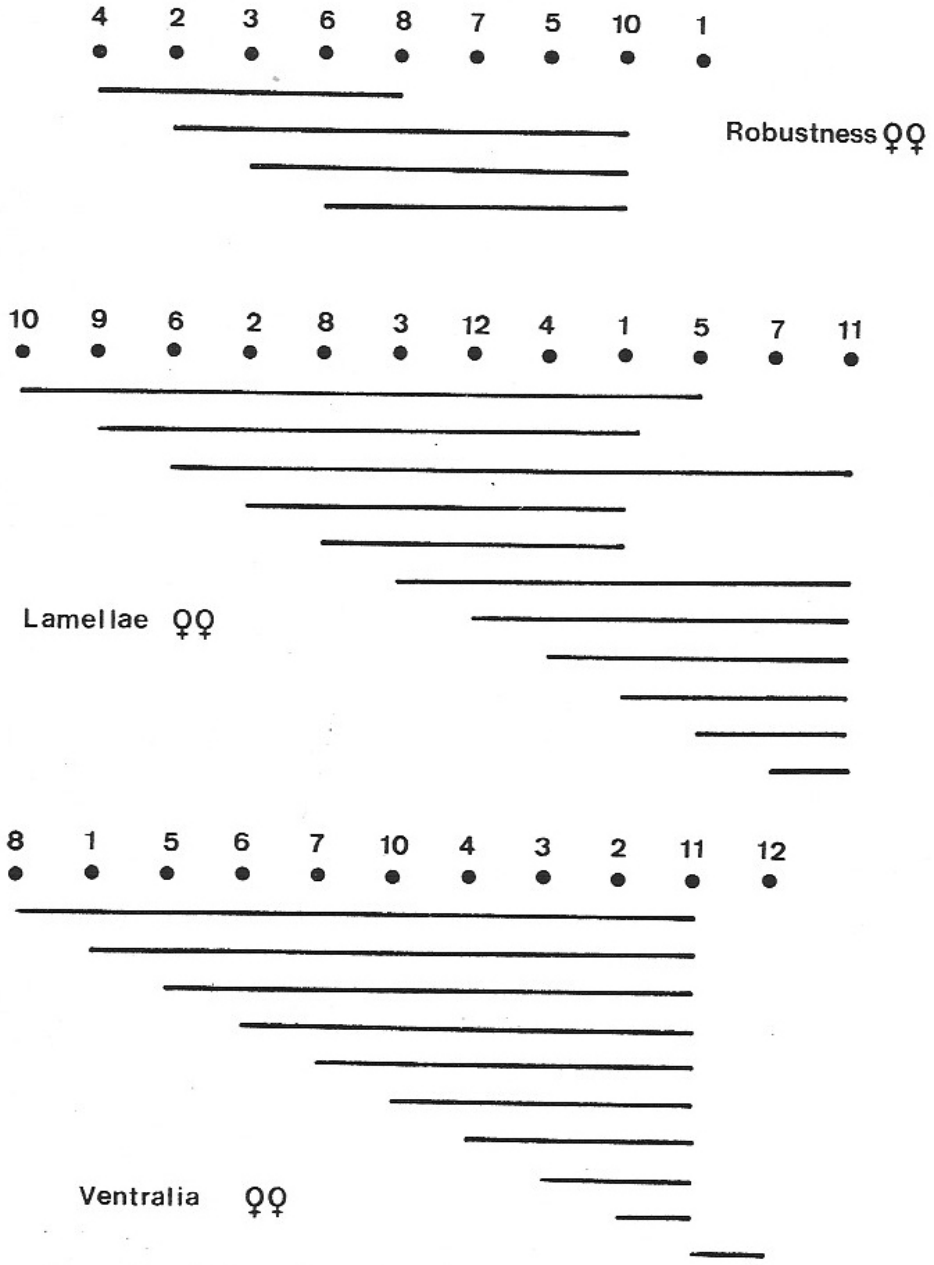

FIGURE 40 — SNK test for Robustness, Lamellae and Ventralia in females.

significant differences compared with those of Colom and Codrell, on one hand and with Hospital, Colom and Codrell, on the other. Such differences may also be observed between these three latter populations and those of Nitge and Sargantana (figure 40).

Robustness. Figure 40 shows the numerous significant differences in this character. Only the Isla del Aire exhibits such differences with respect all the other populations.

RHL. In spite of the previous results of the ANOVA, the SNK test gave no significant differences between the means.

LP/WP. The analysis of the variance showed no significant differences for this character and the SNK test was therefore not performed.

3.3.2. *Cluster Analysis.*

According to this analysis the populations of the islets of Ratas, Codrell, Carbonera and Porros de Fornells are clearly differentiated from the rest, with taxonomic distances greater than 1 (figure 41). The left hand side of the phenogram groups the remaining populations which in turn are subdivided into 2 groups. In the first, a clearly separate form may be observed on Aire and two related forms corresponding to the populations of Colom and Hospital. The most complex group includes two subgroups; one corresponds to the islets of Nitge and the two Addaya and the other encompasses a group of four islets: Sargantana, Rovells, Bledas and Sen Tosqueta with lesser taxonomic distances between them. On analysing these results it should be taken into account that the taxonomic distances calculated may be influenced by internal factors such as the variability itself of the meristic characters subjected to different ecological conditions as well as by external factors such as the sample size (see for example, LOU & LIN, 1973 & CIRER, 1981).

3.3.3. *Chronology of the Menorcan islets.*

Following the bathimetric chronology of FAIRBRIDGE (1960) and LUMLEY (1976), Menorca was definitively separated from Mallorca during the last Riss-Wurm interglacial period. Eight to nine thousand years ago, the set including the Addaya, Nitge and Aire were separated. 1000 years later, Gran and Petita Addaya separated from each other and the islets of Hospital and Bledas separated from Menorca. Finally, 6000 years ago the islets of Lazareto, Colom, Sargantana, Rovells, Porros de Fornells, Sen Tosqueta and Escull de Codrell became separated. The first characteristic of the Rassenkreis on Menorca is thus its recent formation compared with the

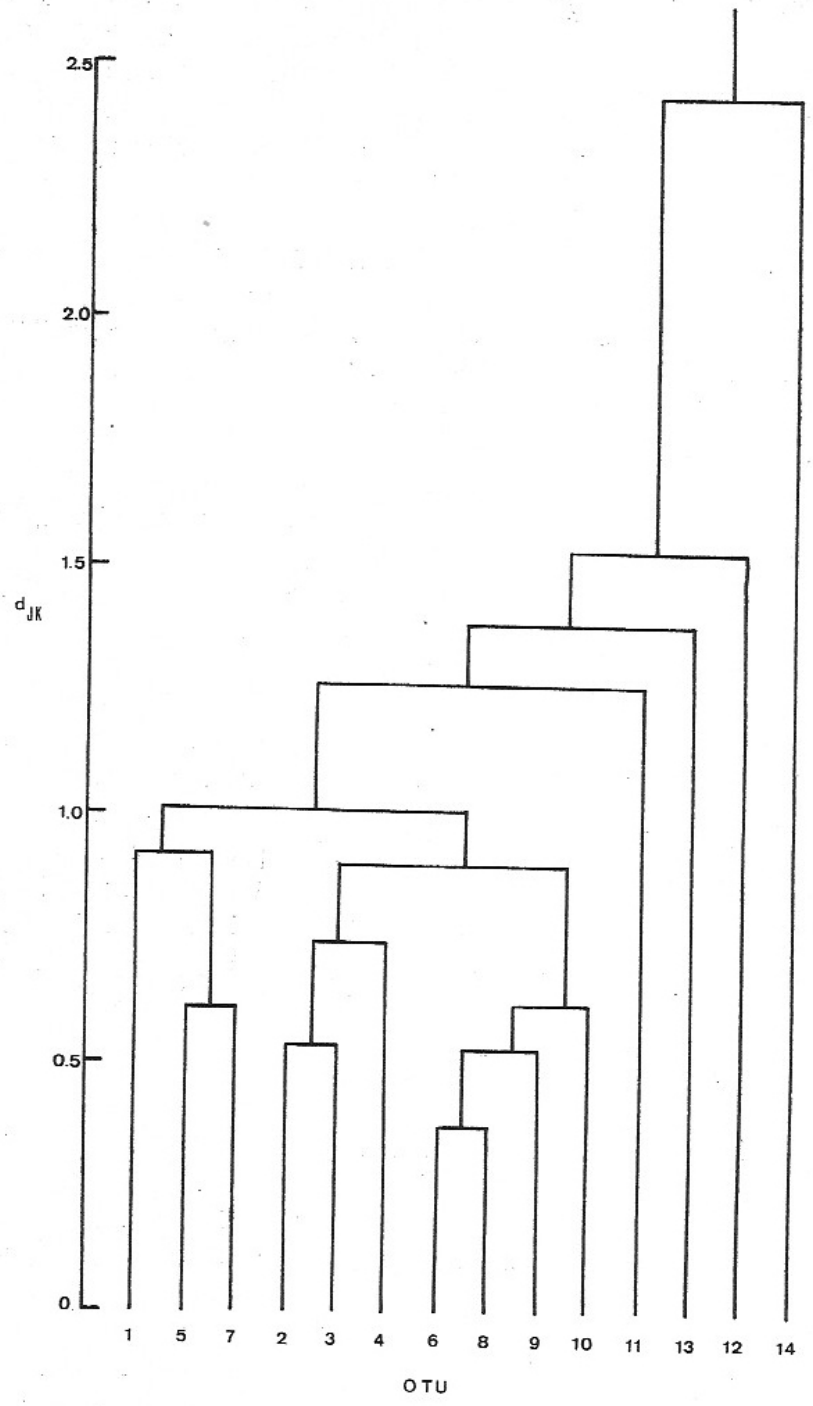

FIGURE 41. — Phenogram of taxonomic distances from the similarity matrix for the 14 populations considered (Table 30).

populations studied in the archipelago of Cabrera (SALVADOR, 1977, 1979) and the Pityusic islands (SALVADOR, 1984 & CIRER, 1981). Furthermore, most of the islets are of very similar age as has been mentioned above. Finally, it should be remembered that the degree of isolation of the populations does not only depend on the bathimetric chronology of the islets. Indeed, it is quite likely that their insular nature was favoured by the width of the channel between the islet and the shore, as in the case of Aire. Moreover, some islets very close to densely populated coastal areas of Menorca have undergone continual visits from fishermen and tourists and have thus maintained more or less constant links with the coast of Menorca. This seems particularly evident in the case of the islet of Colom and all the islets in the bay of Mahón.

3.4. POPULATION DIFFERENTIATION.

As has been reported above, in the specific case of Menorca it is extremely difficult to make any generalization regarding the differentiation between the various populations in view of the lack of information concerning the «mother» population of the main island, at present extinct. However, the results obtained are suggestive of certain conclusions and later taxonomic considerations.

In the first place, there are four well-defined populations all separated from the rest. The first is that of the isla de Ratas, unfortunately extinct when the islet disappeared from the Bay of Mahon. Most of the data concerning its biometry and folidosis are placed at one of the ends of the overall variation range observed in the archipelago.

The population of Carbonera is also clearly separated from the rest, though it is not possible to discover how much so in terms of isolation and antiquity owing to the impossibility of localizing exactly this islet (see above).

The Escull de Codrell, off the south of Menorca, defines a well-differentiated subspecies.

In this case, the lesser age of the islet and its small size inclines us in favour of a process of genetic drift due to the foundational effect (MAYR, 1958, 1963) as the most plausible explanation for its origin.

It is likely that a similar mechanism would have acted in the differentiation of the subspecies of Porros de Fornells, an islet which is very close to Sargantana and Rovells with whose populations it maintains, however, wide divergencies in numerous characters.

In the islet of Aire appears a clearly differentiated melanic subspecies, given the age of the islet and its peculiar ecological characteristics (in prep.).

On the islets of Hospital and Colom off the eastern coast of Menorca there are two populations of similar age (6000-7000 years). At the pattern level there are few really important differences between both islets (see descriptions). Regarding biometry and folidosis, statiscally significant differences may only be seen in the robustness of the females and the SVL of the males (figures 40 and 36) which is slightly greater in those of the islet of Hospital. The similarity of these two populations could be accounted by their age as well as by the fact that both populations are in almost continual contact with the coast of Menorca and successive emigrations might have taken place after the initial isolation, giving rise to a lesser divergence between than and the present-day extinct «mother» population (MAC ARTHUR & WILSON, 1967). From this point of view, the populations of Colom and Hospital would be the most similar to such the initial population of the island of Menorca and would thus form a single subspecies. It could be added that this also coincides with some of the observations made by EISENTRAUT (1929), according to which a progressive darkening would take place in the Menorcan insular lizards from the islet of Colom in question, until the Isla del Aire.

The lizards of Gran Addaya and Petita Addaya obviously belong to the same subspecies and are seen to be closely associated with that inhabiting the islet of Nitge, off Cape Caballeria. The similarities in characters in this case is perhaps the result of a similar evolutionary period, since the three islets are all of practically the same age. In this instance, however, there are noteworthy differences in colouring and pattern which are not included in our statistical analysis and which incline us to separate the populations of Nitge and the Addayas into two different subspecies.

Finally, as may be observed in the phenogram in figure 41, there are four related populations corresponding to Rovells, Sargantana, Sen Tosqueta and Escull de Bledas. Again in this instance, they are islets which are similar in age and are all situated off the northern coast of Menorca. These populations would then form a single subspecies with fairly close relations with Nitge and the Addayas.

3.5. TAXONOMIC RESULTS.

The following is a revision of the taxonomy of *Podarcis lilfordi* in Menorca according to the data reported above.

Podarcis lilfordi lilfordi (GUNTHER)

1874 *Zootoca lilfordi* GUNTHER, Ann. Mag. nat. Hist. London, (4) 14: 159. Terra typica: Isla Aire, Menorca. Sintypes: British Museum (Natural History) London.

1960 *Lacerta lilfordi lilfordi*, MERTENS and WERMUTH, Die Amphib. und Rept. Europas, Frankfurt am Main, 114.

1974 *Lacerta lilfordi lilfordi* SALVADOR, Guía de los Anfíb. y Rept. espanoles, Madrid, 252.

Discussion: The most clearly differentiated subspecies together with the population from the Isla de Ratas, since it occupies the oldest islet off Menorca.

Diagnosis: A large-sized melanic subspecies with relatively high Collaria, Gularia and Ventralia. Very robust, long hindlegs, specially so in females.

Distribution: Isla del Aire.

Podarcis lilfordi rodriquezi (L. MULLER)

1927 *Lacerta lilfordi rodriquezi* L. MULLER, Zool. Anz. 73: 261. Terra typica: Isla das Ratas im Hafen von Mahon, Menorca, Balearen. Holotype: destroyed.

1960 *Lacerta lilfordi rodriquezi* MERTENS & WERMUTH, Die Amphib. und Rept. Europas, Frankfurt am Main, 116.

1974 *Lacerta lilfordi rodriquezi* SALVADOR, Guía de los Anfíb. y Rept. espanoles, Madrid, 256.

Discussion: In spite of the small number of specimens studied, this is undoubtedly a valid subspecies, strongly divergent with respect to the rest of the Menorcan populations. Only four specimens are available in collections.

Diagnosis: A giant subspecies with very large head, low number of dorsal scales and few collar scales. Numerous ventral scales and relatively short hindlegs. General colour greenish brown.

Distribution: Isla de Ratas, presently non-existent.

Podarcis lilfordi carbonerae n. ssp.

Terra typica: Isla Carbonera.

Holotype: ZFMK 11.935, Isla Carbonera, Menorca, ♂ ad. K. Grun Col. 1 January 1933.

Paratypes: ZFMK 11936-42, the same locality and date as the Holotype.

Diagnosis: Subspecies of medium size. Dorsal colouring dark brown. Neck wider than head. Hindlegs relatively short. Large number of dorsal, gular, collar and ventral scales.

Distribution: Isla Carbonera.

Discussion: The impossibility of locating exactly this islet does not permit any inferences regarding the relative age of this subspecies which might be presently extinct.

Podarcis lilfordi codrellensis n.ssp.

Terra typica: Escull de Codrell I. in the southern coast of Menorca. Holotype: AS 1365 Escull de Codrell I. A Salvador Col., 28 September 1982, ♂ ad.

Paratypes: Escull de Codrell I AS 1364, 1366-73, the same data as the Holotype, ZFMK 11910-11916, K. Grun Col. 29 May 1933, Escull de Codrell II, ZFMK 11857-61 K. Grun Col. 29 May 1933.

Diagnosis: Dwarf subspecies with relatively narrow head and very long hindlegs. Low number of gular and collar scales. High number of ventral scales. Back colouring dark brown.

Discussion: In view of the low age of the Esculls de Codrell, this must be a young form whose differences we attribute to genetic drift on an initial population of very small size.

Distribution: Esculls de Codrell I and II.

Podarcis lilfordi porrosicola n.ssp.

Terra typica: Illa des Porros, in the Bay of Fornells, Menorca.
Holotype: AS 1317 ♂ ad., Col. A. Salvador 23 September 1982.
Paratypes: AS 1316, 1318-29, the same data as the Holotype.

Diagnosis: Large subspecies. Low number of dorsal, gular and ventral scales (the latter more numerous in the females). Relatively long hindlegs and narrow head with respect to width of neck. Dorsal colouring olive green with scarcely visible pattern, except in juvenile specimens.

Discussion: As mentioned above this is a well-defined subspecies which is distinct from the populations of Sargantana and Rovells in many characters. The small surface of the islet of Porros and the low population density observed also suggests in this case an effect of genetic drift as the principal microevolutionary mechanism.

Distribution: Islote de Porros (Bay of Fornells).

Podarcis lilfordi balearica (BEDRIAGA)

1879 *Lacerta muralis* var. *balearica* BEDRIAGA. Bull. Soc. zool. France, Paris, 4: 221. Terra typica restricta (MERTENS & L. MULLER, 1940): Hafen von Mahon, Menorca. Holotype: Not find.

1927 *Lacerta lilfordi brauni* L. MULLER, Zool. Anz., Leipzig 73: 261. Terra typica: Isla del Colon bei Menorca, Balearen. Holotype destroyed.

1928 *Lacerta lilfordi hospitalis* EISENTRAUT, Das Aquarium, Berlin, 1928: 121. Terra typica: Isla del Hospital (Isla del Rey) im Hafen von Mahon, Menorca, Balearen. Holotype ZMB 30060. Paratypes: ZMB 30061.

Diagnosis: Subspecies of relatively large size, large number of dorsal, gular and ventral scales and also of subdigital lamellae. Very narrow head with respect to length of the pileus. Dorsal colouring brown marked with black. Not very pronounced pattern.

Discussion: The reasons have already been mentioned for including the populations of Colom and Hospital within a single subspecies. There are very few observable differences between both populations and none of them are present in the complete series studied. MERTENS & VERMUTH (1960) grouped the population Hospital with those of the islets of Addayas, Sargantana and Rovells from which this one is different in numerous characters, as has been reported above.

Podarcis lilfordi addayae (EISENTRAUT)

1928 *Lacerta lilfordi addayae* EISENTRAUT, Das Aquarium, Berlin, 1928: 122. Terra typica: grossere der beiden Addaya-Inseln an der Ostkuste von Menorca, Balearen. Holotype: ZMB 36.069. Paratypes: ZMB 36070-1.

1960 *Lacerta lilfordi balearica* MERTENS & WERMUTH (Partim). Die Amphib. und Rept. Europas. Frankfurt am Main, 114.

1974 *Lacerta lilfordi balearica* SALVADOR (Partim). Guía de los Anfíb. y Rept. espanoles, Madrid, 253.

Diagnosis: Dwarf subspecies with medium values of dorsalia, gularia and ventralia. Relatively long hindlegs. Dorsal colouring dark green marked with brown and black. Well visible pattern of greenish longitudinal bands.

Discussion: MERTENS & WERMUTH (1960) and later included the lizard populations of the Addaya islets as synonimous of *Lacerta lilfordi balearica*, contrary to the distinction made by EISENTRAUT (1928) and also included within this subspecies the populations of Sargantana and Rovells. Statistical analysis of more specimens have allowed us to modify these points of view. It has already been reported that there are numerous differences in morphology and folidosis for the separation into one subspecies on Sargantana and Rovells and another in the Addaya islets. Indeed, these latter bear a closer relationship to the population of the islet of Nitge (see figure 41).

Podarcis lilfordi fenni (EISENTRAUT)

1928 *Lacerta lilfordi fenni* EISENTRAUT, Das Aquarium, Berlin, 1928: 122. Terra typica: Isla Nitge (Isla de Porros) am Cabo Caballeria. Nordkuste von Menorca, Balearen. Holotype: ZMB 36062. Paratypes: ZMB 36063.

1960 *Lacerta lilfordi fenni* MERTENS & WERMUTH, Die Amphib. und Rept. Europas. Frankfurt am Main, 115.

1974 *Lacerta lilfordi fenni* SALVADOR, Guía de los Anfíb. y Rept. espanoles, Madrid, 254.

Diagnosis: A small subspecies with medium values of dorsalia, gularia and ventralia. Very long hindlegs. Back greenish brown, rather marked with black. Scarcely visible reticulated pattern. Ventral zone of rusty pink or greyish blue shades.

Discussion: In spite of the close relationship between the population of Nitge and the Addaya islets (figure 41) we believe it necessary to divide the two into different subspecies since in the phenogram and statistics only meristic data were used. However, at colouring and pattern level the differences between the two are quite apparent.

Distribution: Islet of Nitge or Porros.

Podarcis lilfordi sargantanae (EISENTRAUT)

1928 *Lacerta lilfordi sargantanae* EISENTRAUT, Mitt. zool. Mus. Berlin, 14: 465. Terra typica: inseln Sargantana und Robello im Hafen von Fornells an der Nordkuste von Menorca, Balearen. Holotype: ZMB 36068 (Sargantana). Paratypes: ZMB 36067 (Sargantana).

1960 *Lacerta lilfordi balearica* MERTENS & WERMUTH (Partim). Die Amphib. und Rept. Europas, Frankfurt am Main, 114.

1974 *Lacerta lilfordi balearica* SALVADOR (Partim), Guía de los Anfíb. y Rept. espanoles, Madrid, 253.

Diagnosis: Subspecies of medium size. Medium values also found for dorsalia, gularia and collaria. Back dark brown or greenish visible pattern in longitudinal greenish stripes.

Discussion: The reasons for separating the population of Sargantana with respect to the other populations included in *P. lilfordi balearica* have already been discussed. We did not find sufficient differences in biometry, folidosis, colouring and pattern to warrant the designation of a different subspecies for Sen Tosqueta and Escull de Bledas, islets which are similar in age to Sargantana and Rovells.

Distribution: Islets of Sargantana, Rovells, Sen Tosqueta and Escull de Bledas.

4. DISCUSSION AND CONCLUSIONS

According to our results the menorcan populations of *Podarcis lilfordi* may be divided into a total of nine subspecies. The concept of one subspecies per islet, the basis of German studies carried out at the beginning of the century, is thus obsolete.

An attempt has been made to assess the dificulties involved in the interpretation of the microevolutionary process in the menorcan lizards where we lack a reference element in the «mother» population of the main island. On one hand, the relative newness of numerous islets together with their proximity to the coast might have produced successive emigrations. This, even if the arrival of only a few propagules on the islet takes place during each generation, this may give rise to a low-level reduction in the random effects of genetic drift (MAC ARTHUR & WILSON, 1967). It should not be forgotten either that, as these latter authors pointed out, the smaller the islet, the lesser the probability of their being identical in environment and, in view of this, it would seem more logical to account for the genetic and/or phenological differences between the islets as a result of different selective pressures than as effects of the genetic drift (see for example FORD, 1964). This could have been the case at least in Hospital, Colom, Sargantana and Rovells. Contrary to what probably occurred in other archipelagoes such as that of Cabrera with islets in much less contact. In this sense, it is of great interest that in Menorca there is only one melanic form on the oldest island with the greatest separation from the coast, accounting for 7.14% of the populations studied, while in Cabrera there are 10 melanic forms in 16 populations studied, that is 65% (SALVADOR, 1977).

5. SUMMARY

A study was carried out on 17 populations of *Podarcis lilfordi* inhabiting the islets off the coast of Menorca (Balearic Islands). Pattern and colouring together with the statistical analysis performed suggested that the menorcan rassenskreis comprises a total of 9 subspecies. The evolutionary processes involved appear to be fundamentally governed by the age of the islets, their distance from the coast and by their ecological conditions. Though in certain cases it may be postulated that genetic drift may have acted as a differentiating

mechanism in populations which were initially small. However, interpretation of the microevolutionary process in Menorca is more difficult than in the case of other rassenskreis of the Balearic Islands due to the extinction of the «mother» population on the main island.

RESUMEN

Se han estudiado las poblaciones de *Podarcis lilfordi* procedentes de 17 islotes circundantes de la costa de Menorca. Los resultados del análisis de folidosis, biometría y patrones de diseño, junto con los dendrogramas de afinidades construidos, ha permitido a los autores llevar a cabo una revisión sistemática de tales poblaciones, incluyendo la descripción de tres subespecies nuevas.

6. ACKNOWLEDGEMENTS

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APPENDIX I

TABLES OF BIOMETRY AND FOLIDOSIS.

	n	*x*	*Var.*	*SD*	*CV*	*Lim.*	*Int.*
1	24	69.98	8.96	2.99	4.28	1.24	62.55-76.0
2	17	9.54	1.68	2.76	3.99	0.64	7.5-12.25
3	24	17.52	0.70	0.84	4.80	0.35	15.3-18.8
4	24	8.24	0.17	0.42	5.11	0.17	7-9
5	24	36.11	4.28	2.07	5.73	0.86	31.3-40
6	13	110.34	91.26	9.55	8.66	5.51	95-124.5
7	24	34.66	5.71	2.38	6.89	0.99	31-39
8	24	80.12	9.85	3.13	3.92	1.30	74-86
9	18	22.44	1.43	1.19	5.34	0.58	21-25
10	24	11.91	1.12	1.05	8.89	0.44	10-14
11	24	20.58	3.12	1.76	8.59	0.73	17-24
12	24	28.65	2.05	1.43	5.00	0.59	27-31
13	17	0.13	0.0002	0.01	10.4	0.007	0.11-0.17
14	18	51.24	4.54	2.13	4.16	1.03	47.25-56.75
15	18	2.10	0.006	0.07	3.66	0.03	1.96-2.20

TABLE 1 — Biometry and folidosis of adult males from the Isla del Aire. Above: n = number of specimens studied, x = arithmetic mean, *Var.* = variance, *SD* = standard deviation, *CV* = coefficient of variation, *Lim.* = limits of the parameter at 95% of confidence, *Int.* = variation range of the sample. At the left: 1. Body length (SVL), 2. weight, 3. Length of the Pileus, 4. Width of the Pileus, 5. Length of the hindlegs, 6. Length of the tail, 7. Number of gular scales (Gularia), 8. Number of dorsal scales (Dorsalia), 9. Number of the ventral scales (Ventralia), 10. Number of collar scales (Collaria), 11. Number of femoral pores (Femoralia), 12. Number of subdigital lamellae (Lamellae), 13. Robustness index (= weight/SVL), 14. Relative length of the hindlegs (LHL × 100/SVL), 15. Relative length of the Pileus (LP/WP).

	n	*x*	*Var.*	*SD*	*CV*	*Lim.*	*Int.*
1	27	61.73	16.96	4.11	6.67	1.61	53-73.7
2	19	6.34	2.30	1.51	23.9	0.71	4.5-11.5
3	27	14.49	1.33	1.15	7.97	0.45	10.7-18.1
4	27	6.80	0.21	0.46	6.77	0.18	6-8.6
5	26	31.44	6.03	2.46	7.81	0.98	28.1-37
6	11	93.03	66.39	8.14	8.76	5.15	82-109
7	27	34.85	5.36	2.31	6.64	0.90	29-39
8	26	80.38	14.56	3.81	4.75	1.52	71-86
9	18	22.44	1.43	1.19	5.34	0.58	21-25
10	27	11.55	0.94	0.97	8.43	0.38	10-13
11	27	20.11	2.79	1.67	8.31	0.65	17-23
12	26	28.76	2.98	1.72	6.01	0.69	26-33
13	19	0.10	0.0003	0.01	17.0	0.008	0.07-0.15
14	20	50.32	20.36	4.51	8.97	2.07	44.67-59.24
15	20	2.15	0.004	0.06	3.11	0.03	2.02-2.3

TABLE 2 — Adults females from Isla del Aire.

	n	*x*	*Var.*	*SD*	*CV*	*Lim.*	*Int.*
1	42	61.97	9.47	3.07	4.97	0.96	57-67.4
2	4	3.87	0.39	0.62	16.24	0.72	3-4.5
3	42	15.88	0.36	0.60	3.82	0.18	14.2-17.5
4	42	7.42	0.11	0.34	4.63	0.10	6-8
5	37	32.11	2.54	1.59	4.96	0.53	28.2-34.95
6	13	93.30	92.39	9.61	10.30	5.54	77-112
7	42	33.71	6.50	2.54	7.56	0.79	29-40
8	42	76.83	12.09	3.47	4.53	1.08	70-82
9	42	23.42	4.78	2.18	9.34	0.68	20-28
10	42	12.00	1.46	1.20	10.08	0.37	10-15
11	42	20.92	3.48	1.86	8.92	0.58	16-25
12	38	27.94	4.05	2.01	7.20	0.66	24-33
13	4	0.06	0.001	0.001	2.83	0.002	0.06-0.07
14	7	47.15	15.20	3.89	8.27	3.18	42.81-54.05
15	7	2.12	0.009	0.09	4.59	0.07	2.00-2.27

TABLE 3 — Adult males from Nitge.

	n	*x*	*Var.*	*SD*	*CV*	*Lim.*	*Int.*
1	15	56.07	7.88	2.80	5.01	1.50	51-62.75
2	4	3.87	0.39	0.62	16.24	0.72	3-4.5
3	15	13.67	0.72	0.85	6.24	0.45	12.55-15.5
4	15	6.35	0.19	0.44	7.02	0.23	5.75-7.2
5	15	28.10	3.88	1.97	7.01	1.05	25.2-32.5
6	5	84.60	16.30	4.03	4.77	4.03	67-89
7	15	32.73	8.06	2.84	8.68	1.51	27-36
8	15	74.13	15.12	3.88	5.25	2.07	70-81
9	15	25.73	5.20	2.28	8.87	1.22	23-29
10	15	11.8	2.45	1.56	13.28	0.83	9-14
11	15	19.6	2.97	1.72	8.79	0.92	17-23
12	15	27.33	2.95	1.71	6.29	0.91	24-30
13	4	0.06	0.0001	0.009	13.82	0.01	0.05-0.07
14	8	48.51	8.12	2.84	5.87	2.15	44.44-52.64
15	8	2.17	0.004	0.06	2.93	0.04	2.10-2.29

TABLE 4 — Adult females from Nitge.

	n	*x*	*Var.*	*SD*	*CV*	*Lim.*	*Int.*
1	20	61.66	12.26	3.50	5.68	1.60	53-71.05
2	14	6.17	0.67	0.82	13.32	0.45	5-8
3	20	15.34	0.62	0.79	5.15	0.36	13.45-17.05
4	20	7.41	0.11	0.33	4.52	0.15	6.6-8.0
5	20	30.31	2.90	1.70	00.00	0.78	26.05-32.5
6	9	97.22	24.44	4.94	5.09	3.49	90.5-105.5
7	20	34.50	7.94	2.81	8.17	1.29	30-41
8	20	78.15	15.29	3.91	5.00	1.79	73-86
9	20	22.45	1.73	1.31	5.87	0.60	20-25
10	20	11.90	2.30	1.51	12.86	0.69	10-16
11	20	20.2	4.80	2.19	10.85	1.00	17-25
12	20	28.55	2.47	1.57	5.51	0.72	26-32
13	14	0.09	0.0001	0.009	9.22	0.005	0.09-0.11
14	20	49.22	7.09	2.66	5.41	1.22	41.61-53.11
15	20	2.06	0.006	0.08	3.97	0.03	1.91-2.24

TABLE 5 — Adult males from Gran Addaya.

	n	*x*	*Var.*	*SD*	*CV*	*Lim.*	*Int.*
1	7	54.53	7.12	2.66	4.89	2.17	51.8-60.1
2	5	3.60	0.05	0.22	6.21	0.22	3.5-4
3	8	12.71	0.16	0.39	3.14	0.30	12.2-13.5
4	8	6.00	0.05	0.23	3.91	0.17	5.5-6.2
5	8	25.74	1.73	1.31	5.12	0.99	23.55-28
6	3	80.66	25.08	5.00	6.21	7.08	75-84.5
7	8	33.12	8.69	2.94	8.90	2.22	29-38
8	8	72.75	10.50	3.24	4.45	2.44	69-79
9	8	24.87	3.26	1.80	7.27	1.36	22-27
10	8	11.62	4.26	2.06	17.77	1.56	10-16
11	8	19.12	2.98	1.72	9.03	1.30	17-22
12	8	28.00	2.57	1.60	5.73	1.21	26-30
13	4	0.06	0.0001	0.001	2.83	0.002	0.06-0.07
14	7	47.15	15.20	3.89	8.27	3.18	42.81-54.05
15	7	2.12	0.009	0.09	4.59	0.07	2.00-2.27

TABLE 6 — Females from Gran Addaya.

	n	*x*	*Var.*	*SD*	*CV*	*Lim.*	*Int.*
1	12	62.41	9.70	3.11	4.99	1.87	57.65-65.9
2	10	5.64	0.32	0.56	10.04	0.18	5.0-6.5
3	12	15.21	0.48	0.69	4.56	0.41	13.95-16.05
4	12	7.02	0.12	0.35	5.00	0.21	6.45-7.5
5	10	31.0	2.83	1.68	5.43	1.12	29.3-33.6
6	2	91.25	28.12	5.30	5.81	10.60	87.5-95
7	12	35.16	13.42	3.66	10.42	2.20	31-41
8	12	77.80	12.81	3.58	4.62	2.15	69-83
9	12	21.83	1.42	1.19	5.47	0.71	20-24
10	12	11.58	0.62	0.79	6.85	0.47	11-13
11	12	21.83	3.06	1.74	8.01	1.05	20-25
12	10	29.60	2.04	1.42	4.83	0.95	27-32
13	10	0.08	0.0001	0.007	8.15	0.004	0.07-0.09
14	10	50.12	2.65	1.63	3.25	1.08	47.10-52.72
15	12	2.16	0.003	0.05	2.66	0.03	2.07-2.29

TABLE 7 — Males from Petita Addaya.

	n	*x*	*Var.*	*SD*	*CV*	*Lim.*	*Int.*
1	9	54.53	3.32	1.82	3.34	1.29	52.0-57.4
2	6	3.25	0.07	0.27	8.43	0.22	3-3.5
3	9	12.24	0.18	0.43	3.54	0.30	11.7-13.1
4	9	5.68	0.04	0.21	3.71	0.14	5.4-6
5	9	25.58	0.87	0.61	2.39	0.43	26.75-26.55
6	2	67.42	82.56	9.08	13.43	18.17	61-73.85
7	9	31.88	7.36	2.71	8.51	1.95	28-36
8	9	71.66	9.25	3.04	4.24	2.15	68-78
9	9	23.88	0.36	0.60	2.52	0.42	23-25
10	9	10.77	1.19	1.09	10.14	0.77	9-12
11	9	20.11	1.61	1.26	6.31	0.89	18-22
12	9	28.55	1.02	1.01	3.55	0.71	27-30
13	6	0.05	0.0001	0.004	8.02	0.004	0.05-0.06
14	9	46.93	2.51	1.58	3.38	1.12	44.67-49.65
15	9	2.15	0.002	0.04	2.30	0.03	2.08-2.25

TABLE 8 — Females from Petita Addaya.

	n	*x*	*Var.*	*SD*	*CV*	*Lim.*	*Int.*
1	15	68.64	9.53	3.08	4.50	1.65	64-72.5
2	5	7.6	0.26	0.51	6.82	0.51	7-8.25
3	15	17.52	0.54	0.74	4.23	0.39	16.54-18.5
4	15	8.25	0.20	0.45	5.55	0.24	7.65-8.8
5	14	34.20	1.60	1.26	3.70	0.70	31.3-36.6
6	8	101.0	59.64	7.72	7.65	5.83	90.5-111
7	15	35.60	6.68	2.58	7.26	1.38	30-39
8	15	77.66	16.95	4.11	5.30	2.20	70-84
9	15	25.13	5.40	2.32	9.25	1.34	21-27
10	15	11.40	2.68	1.63	14.30	0.87	10-13
11	15	21.33	3.80	1.96	9.15	1.04	18-25
12	14	29.0	2.00	1.41	4.88	0.78	26-31
13	5	0.10	0.0001	0.004	4.10	0.004	0.10-0.11
14	5	50.39	4.43	2.10	4.18	2.10	47.65-52.77
15	5	2.17	0.001	0.04	1.87	0.04	2.13-2.24

TABLE 9 — Males from Hospital.

	n	*x*	*Var.*	*SD*	*CV*	*Lim.*	*Int.*
1	7	60.43	60.43	22.25	7.81	3.85	54.55-68.0
2	7	5.15	1.61	1.27	24.64	1.03	3.7-7
3	6	14.16	0.54	0.74	5.23	0.66	13.0-14.95
4	7	6.54	0.26	0.51	7.81	0.41	5.65-7.25
5	7	30.93	8.51	2.91	9.43	2.38	27.4-35.35
6	3	105.0	12.0	3.46	3.30	4.89	103-109
7	7	35.14	8.80	2.96	8.45	2.42	33-41
8	7	76.71	11.57	3.40	4.43	2.77	73-82
9	7	23.0	2.66	1.63	7.10	1.33	20-25
10	7	11.0	0.66	0.81	7.42	0.66	10-12
11	7	20.42	2.28	1.51	7.40	1.23	19-23
12	7	29.71	1.90	1.38	4.64	1.12	28-31
13	7	0.08	0.0002	0.01	17.42	0.01	0.06-0.10
14	7	51.26	17.74	4.21	8.22	3.43	46.32-59.03
15	6	2.20	0.01	0.10	4.75	0.09	2.08-2.36

TABLE 10 — Females from Hospital.

	n	*x*	*Var.*	*SD*	*CV*	*Lim.*	*Int.*
1	20	65.72	8.55	2.92	4.45	1.34	60-85-71
2	8	6.84	0.30	0.55	8.04	0.41	6.25-8
3	20	16.82	0.86	0.93	5.52	0.42	15.4-18.8
4	20	7.66	0.28	0.53	6.95	0.24	6.5-8.5
5	19	34.27	2.26	1.50	4.39	0.70	31.85-37
6	11	107.95	59.67	7.72	7.16	4.88	97-117
7	19	34.42	11.59	3.40	9.89	1.60	29-42
8	20	78.75	14.40	3.79	4.82	1.74	70-84
9	20	24.60	5.72	2.39	9.73	1.09	21-29
10	19	11.78	0.95	0.97	8.28	0.46	10-14
11	19	22.57	2.59	1.60	7.13	0.75	20-26
12	18	29.55	2.84	1.68	5.71	0.81	26-32
13	8	0.10	0.0001	0.007	7.15	0.005	0.09-0.12
14	9	52.45	6.24	2.49	4.76	1.76	48.28-57.71
15	9	2.22	0.008	0.09	4.12	0.06	2.09-2.35

TABLE 11 — Males from Colom.

	n	*x*	*Var.*	*SD*	*CV*	*Lim.*	*Int.*
1	19	57.34	10.88	3.29	5.75	1.55	51.5-64.1
2	15	4.18	0.53	0.73	17.56	0.39	3-5.5
3	19	13.55	0.37	0.61	4.51	0.28	12.5-14.9
4	19	6.23	0.10	0.32	5.15	0.15	5.6-6.85
5	19	29.68	3.02	1.74	5.86	0.82	25.5-34.1
6	4	86.37	15.56	3.94	4.57	4.55	81-90
7	19	33.73	9.53	3.08	9.15	1.45	26-38
8	19	73.85	11.69	3.41	4.63	1.61	69-81
9	19	23.57	2.36	1.53	6.53	0.72	21-26
10	19	11.73	1.20	1.09	9.36	0.51	10-14
11	19	21.73	3.09	1.75	8.09	0.82	18-25
12	19	29.89	3.65	1.91	6.40	0.90	27-33
13	15	0.07	0.0001	0.009	13.34	0.005	0.05-0.09
14	19	51.87	12.85	3.58	6.91	1.68	44.27-58.34
15	19	2.17	0.004	0.06	2.93	0.03	2.09-2.31

TABLE 12 — Males from Sargantana.

	n	*x*	*Var.*	*SD*	*CV*	*Lim.*	*Int.*
1	9	62.14	15.69	3.96	6.37	2.80	57.1-67
2	7	6.85	2.80	1.67	24.44	1.36	4.5-9
3	9	15.31	0.89	0.94	6.17	0.66	14.2-16.7
4	9	7.22	0.13	0.36	5.03	0.25	6.7-7.8
5	9	30.92	2.81	1.67	5.43	1.18	28.3-32.9
6	3	93.0	147.00	12.12	13.04	17.14	82-106
7	9	33.33	6.75	2.59	7.79	4.83	31-38
8	8	75.25	6.21	2.49	3.31	1.88	71-79
9	9	21.55	1.27	1.13	5.24	0.79	20-23
10	9	11.66	0.50	0.70	6.06	0.50	11-13
11	9	20.22	1.44	1.20	5.94	0.84	18-22
12	9	28.11	2.11	1.45	5.17	1.02	26-30
13	7	0.10	0.0004	0.02	18.89	0.01	0.07-0.13
14	9	49.80	3.46	1.86	3.74	1.31	48.22-54.60
15	9	2.11	0.005	0.07	3.38	0.05	2.01-2.24

TABLE 13 — Males from Sargantana.

	n	*x*	*Var.*	*SD*	*CV*	*Lim.*	*Int.*
1	18	54.38	11.61	3.40	6.27	1.65	48.8-60.2
2	15	3.85	0.42	0.65	16.97	0,34	3-5
3	17	13.23	0.68	0.82	6.23	0.41	11.8-15.3
4	18	6.11	0.10	0.33	5.40	0.16	5.4-6.75
5	18	28.03	1.88	1.37	4.90	0.66	26-30.9
6	11	81.90	39.69	6.30	7.69	3.98	70-89
7	18	32.55	6.14	2.47	7.61	1.20	29-38
8	18	75.55	12.96	3.60	4.77	1.74	68-82
9	18	22.22	1.71	1.30	5.89	0.63	20-25
10	18	11.11	0.92	0.96	8.67	0.46	9-12
11	18	19.66	3.17	1.78	9.06	0.86	16-24
12	18	27.61	1.54	1.24	4.50	0.60	25-30
13	15	0.06	0.0001	0.008	11.56	0.0043	0.05-0.08
14	18	51.69	11.97	3.47	6.70	1.67	46.68-57.83
15	17	2.17	0.005	0.07	3.37	0.03	2.01-2.26

TABLE 14 — Femalel from Sargantana.

	n	*x*	*Var.*	*SD*	*CV*	*Lim.*	*Int.*
1	8	64.5	15.33	3.91	6.07	2.96	56.65-69.4
2	6	6.76	0.76	0.87	12.94	0.78	4.5-7.5
3	8	15.80	0.97	0.98	6.23	0.74	14-16.8
4	8	7.33	0.30	0.55	7.53	0.41	6.6-8.4
5	8	32.63	4.52	2.12	6.52	1.60	29.3-35.1
6	8	82.50					
7	8	32.87	9.26	3.04	9.26	2.30	29-36
8	8	76.12	13.26	3.64	4.78	2.75	71-80
9	8	21.87	0.69	0.83	3.81	0.63	21-23
10	8	11.62	1.12	1.06	9.12	0.80	11-13
11	8	19.87	3.26	1.80	9.10	1.36	17-22
12	8	27.87	0.69	0.83	2.99	0.63	27-29
13	8	0.09	0.0003	0.01	17.16	0.01	0.07-0.11
14	8	50.60	2.42	1.55	3.08	1.17	48.87-53.04
15	8	2.15	0.005	0.07	3.49	0.05	2.00-2.24

TABLE 15 — Males from Escull de Bledas.

	n	*x*	*Var.*	*SD*	*CV*	*Lim.*	*Int.*
1	3	56.56	8.46	2.90	5.14	4.11	53.8-59.6
2	3	3.83	0.08	0.28	7.53	0.40	3.5-4.0
3	3	12.93	0.33	0.57	4.46	0.81	12.6-13.5
4	3	6.0	0.07	0.26	4.41	0.37	5.7-6.2
5	3	28.82	2.36	1.53	5.33	2.17	27.8-30.6
6	2	84.75	190.12	13.78	16.2	27.57	75-94.5
7	3	33.66	5.33	2.30	6.86	3.26	31-35
8	3	73.33	9.33	3.05	4.17	4.32	70-76
9	3	23.0	1.0	1.0	4.35	1.41	22-24
10	3	11.33	5.33	2.30	20.38	3.26	10-14
11	3	21.33	2.33	1.52	7.16	2.16	20-23
12	3	27.33	1.33	1.54	4.22	1.63	26-28
13	3	0.06	0.0001	0.003	4.51	0.004	0.06-0.07
14	3	51.07	15.86	3.98	7.80	5.63	46.64-64.35
15	3	2.14	0.005	0.07	3.49	0.10	2.06-2.21

TABLE 16 — Females from Escull de Bledas.

	n	*x*	*Var.*	*SD*	*CV*	*Lim.*	*Int.*
1	20	60.75	5.98	2.44	4.03	1.12	57-65
2	—	———	———	———	———	———	———
3	20	15.72	0.15	0.38	2.47	0.17	15.2-16.8
4	20	7.36	0.04	0.22	3.03	0.10	7-7.9
5	19	31.67	3.56	1.88	5.96	0.89	29-36
6	1	103	———	———	———	———	———
7	20	34.15	5.60	2.36	6.93	1.08	30-36
8	20	78.90	8.62	2.93	3.72	1.34	73-83
9	9	24.00	0.50	0.70	2.95	0.50	23-25
10	20	11.20	1.11	1.05	9.43	0.48	9-13
11	20	21.40	3.09	1.75	8.22	0.80	18-25
12	19	28.00	1.00	1.00	3.57	0.47	26-30
13	—	———	———	———	———	———	———
14	19	52.14	5.45	2.33	4.48	1.10	47.61-56.66
15	20	2.13	0.003	0.05	2.60	0.02	2.02-2.24

TABLE 17 — Males from Sen Tosqueta.

	n	*x*	*Var.*	*SD*	*CV*	*Lim.*	*Int.*
1	7	57.85	6.80	2.60	4.51	2.13	53-61
2	—	———	———	———	———	———	———
3	7	13.48	0.13	0.36	2.72	0.29	12.8-14.0
4	7	6.44	0.02	0.17	2.67	0.14	6.2-6.6
5	7	27.85	1.80	1.34	4.83	1.09	26-30
6	1	103	———	———	———	———	———
7	7	33.28	7.23	2.69	8.08	2.19	28-36
8	7	73.71	7.23	2.69	3.65	2.19	70-78
9	—	———	———	———	———	———	———
10	7	10.85	1.14	1.06	9.85	0.87	10-13
11	7	19.85	0.80	0.89	4.53	0.73	19-21
12	7	26.71	2.23	1.49	5.60	1.22	24-28
15	—	———	———	———	———	———	———
14	7	48.16	2.87	1.69	3.52	1.38	46.55-50.84
15	7	2.09	0.002	0.05	2.55	0.04	2.03-2.19

TABLE 18 — Females from Sen Tosqueta.

	n	*x*	*Var.*	*SD*	*CV*	*Lim.*	*Int.*
1	10	64.02	5.19	2.27	3.56	1.51	61-67.3
2	4	7.87	0.22	0.47	6.08	0.55	7.5-8.5
3	10	16.18	0.40	0.63	3.92	0.42	15.25-17
4	10	7.73	0.07	0.26	3.46	0.17	7.45-8.15
5	9	32.15	2.30	1.51	4.72	1.07	30.2-34.2
6	7	93.55	114.47	10.69	11.44	0.73	75-105.3
7	10	33.70	7.56	2.75	8.16	1.83	31-39
8	10	76.10	10.76	3.28	4.31	2.18	71-82
9	10	24.10	4.10	2.02	8.40	1.34	21-27
10	10	12.50	2.05	1.43	11.47	0.95	10-15
11	10	22.30	4.01	2.00	8.98	1.33	19-26
12	9	29.00	4.75	2.17	7.52	1.54	26-34
13	4	0.12	0.0001	0.007	6.49	0.009	0.11-0.12
14	4	50.38	2.92	1.70	3.39	1.97	47.93-51.67
15	5	2.10	0.005	0.07	3.52	0.07	2.02-2.21

TABLE 19 — Males from Rovells.

	n	*x*	*Var.*	*SD*	*CV*	*Lim.*	*Int.*
1	3	60.0	7.39	2.71	4.53	3.84	57-62.3
2	2	2.0	0	———	———	———	2
3	3	13.73	0.06	0.25	1.83	0.35	13.5-14.0
4	3	6.65	0.03	0.18	2.71	0.25	6.5-6.85
5	3	28.28	3.90	1.97	6.98	2.79	26.05-29.80
6	1	82.0	———	———	———	———	———
7	3	30.66	0.33	0.57	1.88	0.81	30-31
8	3	71.33	2.33	1.52	2.14	2.16	70-73
9	3	23.66	4.33	2.08	8.80	2.94	22-26
10	3	10.33	0.33	0.57	5.59	0.81	10-11
11	3	18.66	0.33	0.57	3.09	0.81	18-19
12	3	26.33	0.33	0.57	2.19	0.81	26-27
13	2	0.081	0.0001	0.001	1.75	0.002	0.080-0.082
14	3	52.92	3.27	1.80	3.42	2.55	50.87-54.27
15	3	2.09	0.006	0.07	3.80	0.11	2.04-2.19

TABLE 20 — Females from Rovells.

	n	*x*	*Var.*	*SD*	*CV*	*Lim.*	*Int.*
1	9	66.82	2.47	1.57	2.35	1.11	64.65-70
2	2	7.75	0.12	0.35	4.56	0.70	7.5-8.0
3	9	16.36	0.25	0.50	3.12	0.36	15.8-17.5
4	9	7.60	0.12	0.36	4.66	0.25	7.2-8.15
5	9	34.10	1.70	1.30	3.83	0.92	32-36
6	1	104	———	———	———	———	———
7	9	30.55	8.27	2.87	9.42	2.03	26-35
8	9	74.00	15.50	3.93	5.32	2.78	69-81
9	3	21.66	0.33	0.57	2.66	0.81	21-22
10	8	11.37	1.12	1.06	9.32	0.80	10-13
11	8	18.87	22.41	4.73	25.00	3.57	18-23
12	8	28.50	1.42	1.19	4.19	0.90	27-31
13	2	0.11	0.0001	0.003	3.01	0.007	0.11-0.12
14	3	52.43	7.99	2.82	5.39	3.99	49.28-54.75
15	3	2.14	0.01	0.13	6.40	0.19	2.00-2.28

TABLE 21 — Males from Porros (Bay of Fornells).

	n	*x*	*Var.*	*SD*	*CV*	*Lim.*	*Int.*
1	10	61.50	3.38	1.84	2.99	1.22	60-64
2	—	———	———	———	———	———	———
3	10	16.03	0.06	0.26	1.64	0.17	15.6-16.5
4	10	7.60	0.04	0.22	2.91	0.14	7.2-8
5	9	33.00	1.48	1.21	3.69	0.86	31.8-35.0
6	6	86.50	161.10	12.69	14.67	11.32	71-101
7	10	33.50	7.30	2.71	8.11	1.81	30-39
8	10	76.20	35.51	5.95	7.82	3.97	68-82
9	6	25.83	0.16	0.40	1.58	0.36	25-26
10	10	9.60	12.93	3.59	37.46	2.39	9-13
11	10	22.70	0.67	0.82	3.63	0.54	22-24
12	9	30.22	2.94	1.71	5.68	1.21	29-32
13	—	———	———	———	———	———	———
14	10	53.62	1.94	1.39	2.60	0.92	51.29-55.00
15	10	2.10	0.004	0.06	3.03	0.04	2.0-2.19

TABLE 22 — Males from Esculls de Codrell I and II.

	n	*x*	*Var.*	*SD*	*CV*	*Lim.*	*Int.*
1	7	56.57	6.28	2.50	4.43	2.04	52.0-60.0
2	—	———	———	———	———	———	———
3	7	13.62	0.57	0.75	5.57	0.61	12.9-15.0
4	7	6.28	0.10	0.32	5.15	0.26	5.8-6.8
5	7	30.02	4.27	2.06	6.88	1.68	28.0-33.0
6	—	———	———	———	———	———	———
7	7	34.71	4.23	2.05	5.93	1.68	32-37
8	7	72.57	9.95	3.15	4.35	2.57	69-77
9	1	27	———	———	———	———	———
10	7	9.57	0.61	0.78	8.22	0.64	8-10
11	7	21.71	5.23	2.28	10.54	1.86	19-25
12	7	30.28	2.90	1.70	5.63	1.39	29-33
13	—	———	———	———	———	———	———
14	7	53.10	10.93	3.30	6.23	2.70	48.27-57.89
15	7	2.16	0.01	0.13	6.00	0.10	2.02-2.38

TABLE 23 — Females from Esculls de Codrell I and II.

	n	*x*	*Var.*	*SD*	*CV*	*Lim.*	*Int.*
1	4	63.00	4.66	2.16	3.43	2.49	60-65
2	—	———	———	———	———	———	———
3	4	16.00	0.12	0.35	2.22	0.41	15.5-16.3
4	4	7.62	0.18	0.43	5.70	0.50	7.2-8
5	4	31.70	1.56	1.24	3.94	1.44	30-33
6	1	93	———	———	———	———	———
7	4	34.75	4.25	2.06	5.93	2.30	34-37
8	4	78.00	5.33	2.30	2.96	2.66	76-80
9	4	27.50	3.00	1.73	6.30	2.00	25-29
10	4	13.50	1.66	1.29	9.56	1.49	12-15
11	4	21.50	3.66	1.91	8.91	2.21	19-23
12	4	28.75	6.91	2.63	9.15	3.03	26-31
13	—	———	———	———	———	———	———
14	4	50.32	2.13	1.46	2.90	1.68	48.92-52.38
15	4	2.09	0.009	0.09	4.73	0.11	2.0-2.21

TABLE 24 — Males from Carbonera.

	n	*x*	*Var.*	*SD*	*CV*	*Lim.*	*Int.*
1	4	57.50	4.33	2.08	3.62	2.40	55.0-60.0
2	—	———	———	———	———	———	———
3	4	13.60	0.12	0.34	2.55	0.40	13.3-13.9
4	4	6.50	0.06	0.24	3.77	0.28	6.3-6.8
5	4	26.57	1.18	1.09	4.10	1.25	25-27.5
6	—	———	———	———	———	———	———
7	4	33.00	10.00	3.16	9.58	3.65	29-36
8	4	75.50	3.66	1.91	2.54	2.21	73-77
9	4	28.25	2.25	1.50	5.31	1.73	26-29
10	4	12.75	2.25	1.50	11.76	1.73	12-15
11	4	20.75	1.58	1.25	6.06	1.45	19-22
12	4	28.25	0.91	0.95	3.39	1.10	27-29
13	—	———	———	———	———	———	———
14	4	46.21	0.49	0.70	1.52	0.81	5.45-47.01
15	4	2.09	0.007	0.08	4.04	0.09	2.01-2.2

TABLE 25 — Females from Carbonera.

	n	*x*	*Var.*	*SD*	*CV*	*Lim.*	*Int.*
1	4	76.75	4.25	2.06	2.69	2.38	67-78
2	—	———	———	———	———	———	———
3	4	19.45	0.13	0.36	1.90	0.42	18.1-19.8
4	4	9.95	0.01	0.10	1.01	0.11	9.8-10
5	3	37.73	0.46	0.68	1.80	0.96	37.2-38.5
6	—	———	———	———	———	———	———
7	4	28.75	8.25	2.87	9.99	3.31	29-32
8	4	62.25	2.91	1.70	2.74	1.97	60-64
9	4	25.75	2.25	1.50	5.83	1.73	24-27
10	4	10.25	0.91	0.95	9.34	1.10	9-11
11	4	22.75	2.25	1.50	6.59	1.73	21-24
12	3	29.33	1.33	1.15	3.94	1.63	28-30
13	—	———	———	———	———	———	———
14	3	48.80	1.36	1.17	2.40	1.65	47.46-49.6
15	4	1.95	0.001	0.03	1.84	0.04	1.90-1.98

TABLE 26 — Males from the Isla de Ratas.

	n	*x*	*Var.*	*SD*	*CV*	*Lim.*	*Int.*
Gularia	3	32.33	1.33	1.15	3.57	1.63	31-33
Dorsalia	3	79.00	31.00	5.56	7.05	7.87	74-85
Ventralia	3	22.33	2.33	1.52	6.84	2.16	21-24
Colla ia	3	1 3ì	0.33	0.57	5.09	0.81	11-12
Femoralia	1	20.	———	———	———	———	———
Llamellae	3	29.33	2.33	1.52	5.21	2.16	28-31
LMPR	3	48.86	4.50	2.12	4.35	3.00	46.42-50.23
A	3	0.08	0.0007	0.02	32.50	0.03	0.06-0.11
LPR	3	2.10	0.001	0.03	1.83	0.05	2.07-2.15

TABLE 27 — Juvenile specimens from A3. Only biometric indices and folidosis values are included.

Population	*Masseteric < tympanic*	*Masseteric < tympanic*	*Masseteric = tympanic*	*Masseteric absent*
Aire	48.78	14.63	34.14	2.43
Nitge	63.41	9.75	26.82	——
Gran Addaya	55.17	10.34	27.58	6.89
Petita Addaya	70.37	3.70	22.22	3.70
Hospital	64.00	8.00	28.00	——
Escull de Bledas	60.00	13.33	26.66	——
Colom	29.03	9.67	61.29	——
Sargantana	60.46	6.97	30.23	2.32
Porros (Fornells)	80.00	20.00	——	——
Rovells	33.33	33.33	33.33	——

TABLE 28 — Presence and relative size of masseteric sheild in several populations. Cummulative values for males and females.

	Fs	n^1	*p*	*% between*	*% within*
SVL ♂♂	18.9828	15.5384	<0.001	53.6460	46.3539
SLV ♀♀	10.1490	9.4709	<0.001	49.1356	50.8643
Gularia ♂♂	3.3470	16.1750	<0.001	12.6716	87.3283
Gularia ♀♀	3.6337	9.6292	<0.001	21.4947	78.5052
Dorsalia ♂♂	6.3224	16.1005	<0.001	24.8443	75.1556
Dorsalia ♀♀	6.0602	9.5615	<0.001	34.6073	65.3926
Ventralia ♂♂	4.2892	14.3203	<0.001	18.6788	81.3211
Ventralia ♀♀	3.6992	8.4540	<0.001	24.2015	75.7984
Collaria ♂♂	3.3761	15.8427	<0.001	13.0422	86.9577
Collaria ♀♀	2.7636	9.2737	n.s.	15.9788	84.0211
Femoralia ♂♂	3.2114	16.4052	<0.001	11.8787	88.1212
Femoralia ♀♀	2.0124	9.3441	n.s.	9.7759	90.2240
Lamellae ♂♂	2.5265	15.3692	n.s.	9.0352	90.9647
Lamellae ♀♀	6.3983	10.1920	<0.001	34.6263	65.3736
RLHL ♂♂	3.7408	15.5798	<0.001	14.9603	85.0396
RLHL ♀♀	3.6755	10.1082	<0.001	20.9289	79.0710
LP/WP ♂♂	2.8731	16.6218	<0.001	10.1278	89.8721
LP/WP ♀♀	1.4854	9.2647	n.s.	4.9785	95.0214
R ♂♂	18.1167	7.8353	<0.001	68.5983	31.4016
R ♀♀	12.4832	7.2928	<0.001	61.1587	38.8412

TABLE 29 — Summarized results of the analysis of variance. Above: *Fs* = observed value of the variance quotient, n^1 = correction factor for unequal sample size, *p* = level of the significance, *% between* = variation percentage between populations, *% within* = variation percentage within populations. RLHL = Relative length of the hindlegs. R = Robustness.

OTU	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1														
2	1.37													
3	1.11	0.53												
4	1.22	0.72	0.68											
5	0.75	1.17	1.07	0.85										
6	1.01	0.74	0.74	0.72	0.92									
7	1.08	1.34	1.32	0.96	0.61	1.04								
8	0.99	0.82	0.68	0.75	0.99	0.30	1.14							
9	0.89	0.64	0.68	0.81	0.99	0.46	1.23	0.58						
10	0.94	1.05	0.93	1.10	1.06	0.64	1.15	0.67	0.54					
11	1.09	1.58	1.38	1.47	1.33	1.11	1.49	1.00	1.26	0.87				
12	1.54	1.77	1.63	1.41	1.17	1.56	1.29	1.54	1.47	1.43	1.65			
13	1.40	0.98	1.09	1.33	1.39	1.42	1.43	1.53	1.28	1.34	1.94	1.94		
14	2.59	2.48	2.45	2.35	2.53	2.43	2.52	2.55	2.40	2.13	2.36	2.48	2.50	

TABLE 30 — Similarity matrix for the 14 OTU's (populations) studied after previously standarized values.

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