



Figure 3.--Plot of  $c_3/c_0$  vs.  $c_2/c_0$  showing the position of phyllostomines and stenodermatines. Silhouettes are reconstructions of noseleaves using the zeroth, first, second, and third Fourier parameters for different values of  $c_2$  and  $c_3$ .

that apparently do not exist among phyllostomids: noseleaves with large and robust spears and small horseshoes (Fig. 3, lower right), or noseleaves with a divided horseshoe (Fig. 3, upper left).

It is apparent that the noseleaves of stenodermatines and phyllostomines are very similar (Figs. 2 and 3). One way of testing the differences between the two groups is to use profile analysis (Johnson and Wichern, 1988). The idea is to separate the comparison into two different hypotheses;  $H_01$ : the profiles of stenodermatines and phyllostomines in Fig. 2 are parallel,  $H_02$ : if  $H_01$  is true, then the lines are coincident. The first hypothesis tests shape similitudes, because isometric objects should show parallel profiles when using their Fourier parameters; the second hypothesis tests the equivalence of size once the similitude of shape has been shown. The hypothesis of parallelism can be tested using the equivalent hypothesis: