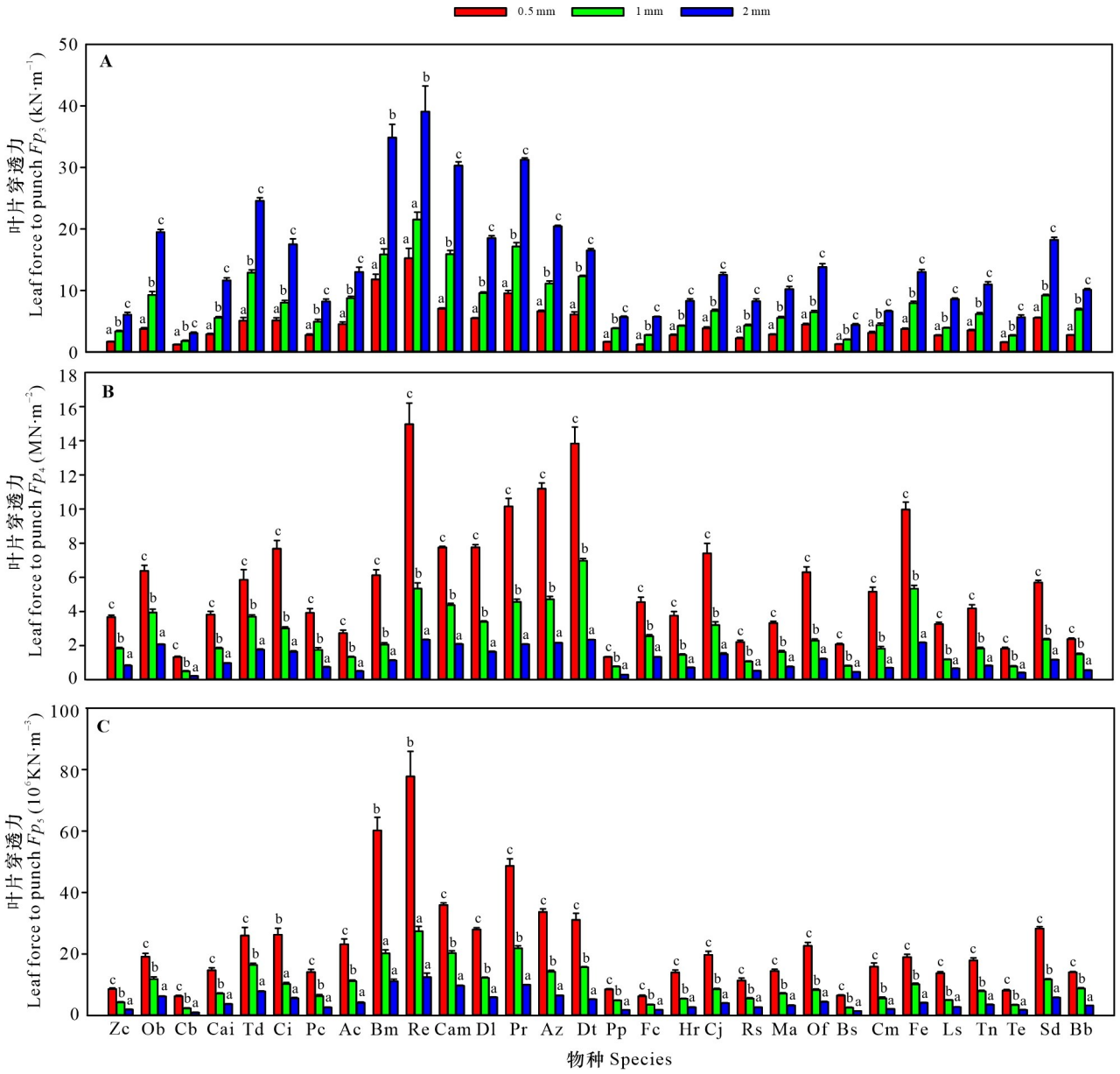
附图：

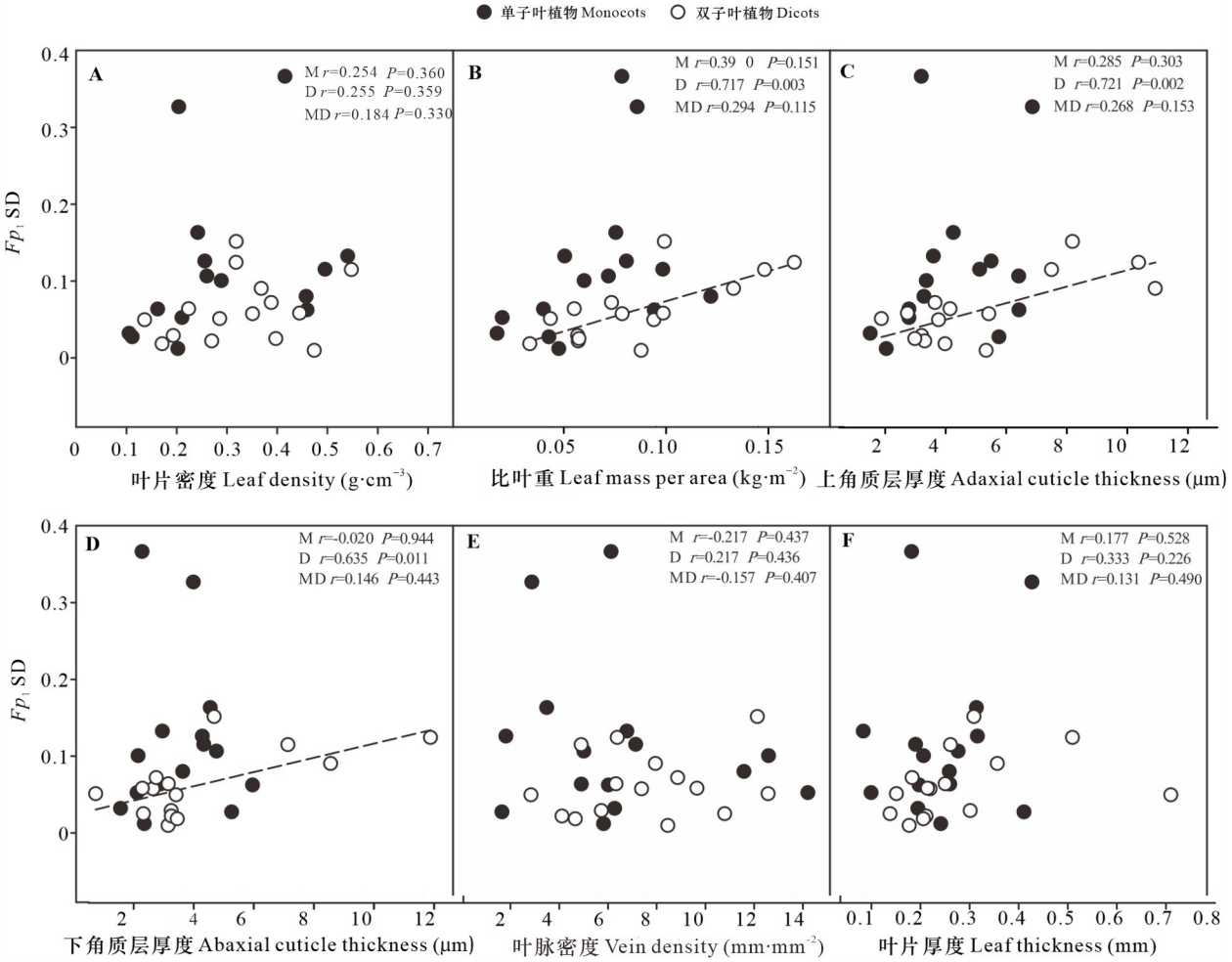


图中缩写字母代表的物种见表 1。不同字母代表不同直径穿刺针的穿透力之间差异显著(P<0.05)。

The specific species represented by the abbreviated letters in the figure are shown in Table 1. Different letters represent significant differences in the force to punch of different needle diameters (P<0.05).

附图 1　30 种植物不同校准方式下 3 种直径穿刺针的叶片穿透力差异

Attached Fig. 1　Differences between the leaf force to punch based on three diameters punch needle and different calibration methods in 30 species

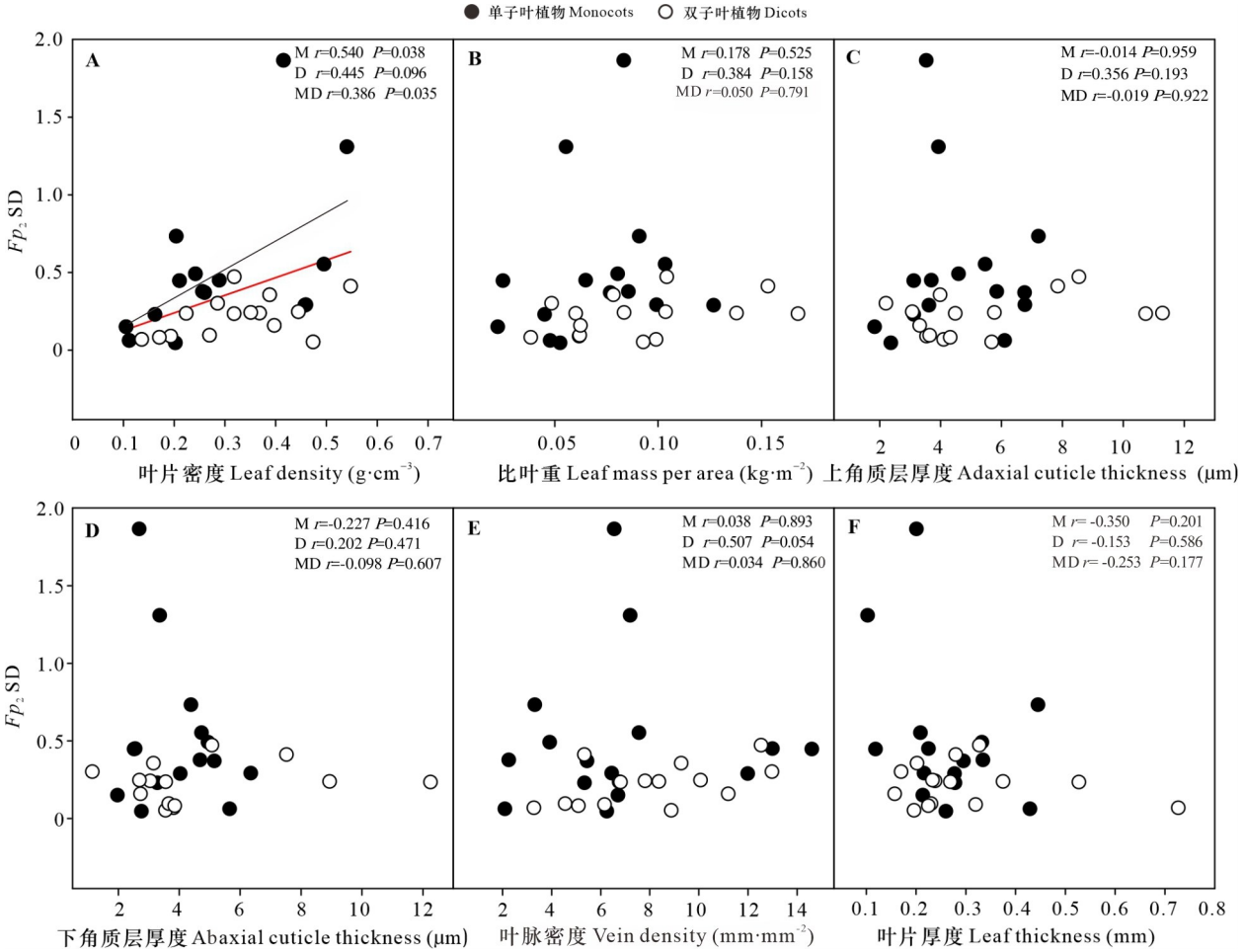


Fp_1 SD 表示 Fp_1 3 种直径穿刺针叶片穿透力之间的差异。黑圆表示单子叶植物，白圆表示双子叶植物。M，D，MD 分别表示单子叶植物、双子叶植物、单子叶和双子叶 30 种植物。$P<0.05$ 表示显著相关；$P<0.01$ 表示极显著相关。下同。黑色虚线为双子叶植物的相关趋势线。

$\triangle Fp_1$ SD represents differences between the leaf force to punch of three diameters punch needle of Fp_1. Black circles represent monocots, white circles represent dicots. M, D, and MD represent monocots, dicots and thirty species of both groups, respectively. $P < 0.05$ represents significant correlation; $P < 0.01$ represents highly significant correlation. The same below. The black dashed line is the associated trend line for the dicots.

附图 2 Fp_1 3 种直径穿刺针叶片穿透力之间的差异与叶片性状的相关性分析

Attached Fig. 2 Correlation between the differences in leaf force to punch of three diameters punch needle and leaf traits of Fp_1

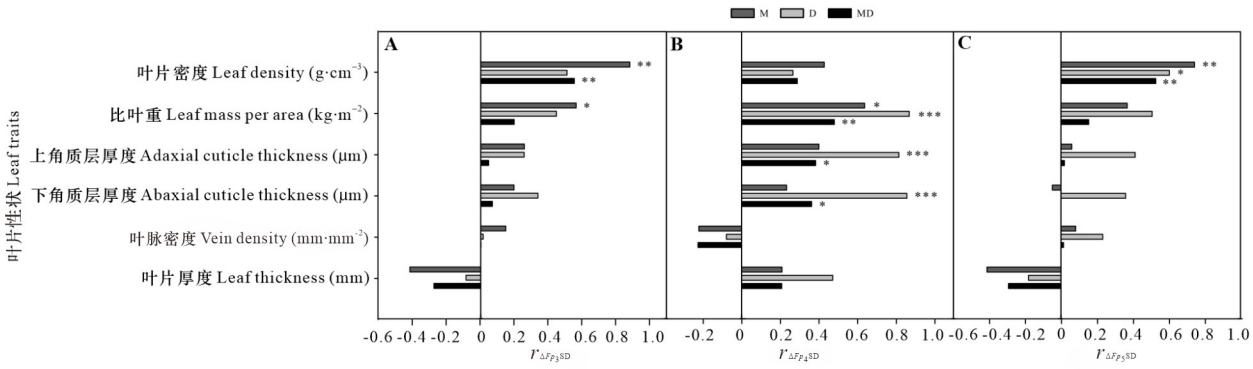


Fp_2 SD 表示 Fp_2 3 种直径穿刺针叶片穿透力之间的差异。黑色实线为单子叶植物的相关趋势线，红色实线为单子叶和双子叶 30 种植物的相关趋势线。

△Fp_2 SD represents differences between the leaf force to punch of three diameters punch needle of Fp_2. The black solid line is the associated trend line for the monocots, and the red solid line is the associated trend line for the monocots and dicots thirty species.

附图 3　Fp_2 3 种直径穿刺针叶片穿透力之间的差异与叶片性状的相关性分析

Attached Fig. 3　Correlation between the differences in leaf force to punch of three diameters punch needle and leaf traits of Fp_2



$r_{\triangle Fp\,SD}$表示 3 种直径穿刺针叶片穿透力之间的差异与叶片性状的皮尔逊相关值。* 表示显著相关($P<0.05$)；** 表示极显著相关($P<0.01$)；*** 表示极其显著相关($P<0.001$)。

$r_{\triangle Fp\,SD}$ represents the Pearson correlation coefficients of the difference between the leaf force to punch of three diameters punch needle and leaf traits. * represents significant correlation ($P < 0.05$); ** represents highly significant correlation ($P < 0.01$); *** represents extremely significant correlation ($P < 0.001$).

附图 4 Fp_3、Fp_4、Fp_5 3 种直径穿刺针叶片穿透力之间的差异与叶片性状的相关性分析

Attached Fig. 4 Correlations between the differences in leaf force to punch of three diameters punch needle and leaf traits of Fp_3, Fp_4, and Fp_5