1 Calyx 5-partite. Fruit not completely enclosed in the calyx  
+ Calyx shallowly 5-lobed, completely enclosing the fruit  

2 (1) Plants vinous to scabrid  
+ Plants glabrous  

3 (2) Stigmas 2, linear-recurved, exserted  
+ Stigma solitary, minutely 2-fid or capitate, included  

4 (3) Stigma conical, entire or not  
+ Stigma capitate, entire  

5 (4) Flowers bracteate or at least some  
+ Flowers ebracteate  

6 (5) Prostrate to decumbent herbs. Leaves linear lanceolate to elliptic  
+ Effect semi-shrubby herbs. Leaves linear, 25-50 mm long  

7 (6) Inflorescence compact, 20-40 mm long. Leaves lanceolate to elliptic. Flowers sessile  
+ Inflorescence lax, 20-100 mm long. Leaves linear-lanceolate (lower down on the inflorescence)  

8 (5) Corolla lobes caudate-acuminate  
+ Corolla lobes obtuse to ovate or caudate  

9 (8) Corolla hairy within  
+ Corolla glabrous within  

10 (9) Hairs within corolla in two distinct zones  
+ Hairs not present in zones  

11 (10) Corolla 4-8 mm long  
+ Corolla 2-3 mm long  

12 (11) Corolla lobes linear, inflexed. Stigma 1.5-1.8 mm long  
+ Corolla lobes ± ovate, obtuse. Stigma 0.7-0.8 mm long  

13 (12) Leaves ovate-lanceolate to lanceolate. Hairs-arising from a swollen base. Inflorescence up to 9 flowered. Corolla uniformly hairy within  
+ Leaves ovate to ovate-oblong. Hairs without a swollen base. Inflorescence up to 20-flowered. Corolla not uniformly hairy within  

14 (11) Leaves ovate, 7-10 mm long. Flowers distantly placed. Anthers c. 1 mm long, ± ovate, attached c. 0.9 mm from corolla base. Stigma 1 mm long  
+ Leaves elliptic to obovate, 10-25 mm long. Flowers close set. Anthers 0.5-0.6 mm long, narrow, attached c. 0.5 mm from corolla base. Stigma 0.4 mm long  

15 (9) Plants annual  
+ Plants perennial  

16 (15) Corolla lobes sublinear, inflexed  
+ Corolla lobes ovate to oblong, obtuse  

17 (16) Plants greyish-white. Flowers uniseriate. Calyx deciduous at length  
+ Plants grey to greenish-grey. Flowers biseriate. Calyx persistent at length  

18 (15) Corolla lobes ovate to oblong, obtuse  
+ Corolla lobes sublinear, inflexed  

19 (18) Leaves ovate to oblong-ovate. Anthers oblong, 1.8-2 mm long  
+ Leaves lanceolate to linear-lanceolate. Anthers narrow ovate, 0.8-1 mm long  

20 (19) Plants decumbent to procumbent; stems up to 15 mm thick at base. Leaf margin revolute or indistinctly undulate. Nutlet margin winged  
+ Plants erect to suberect, stems up to 5 mm thick at base. Leaf margin crisp-undulate. Nutlet margin not-winged  

21 (18) Anther connectives not produced  
+ Anther connectives produced  

22 (21) Sinuses of corolla lobes without dentitions or lobes. Anthers 1.0 mm long  
+ Sinuses of corolla lobes with dentitions or lobes  

2 Heliotropium supinum
3 Heliotropium curassavicum
4 Heliotropium ophioglossum
5 Heliotropium rariflorum
6 Heliotropium zeylanicum
7 Heliotropium marifolium
8 Heliotropium strigosum
9 Heliotropium baluchistanicum
10 Heliotropium alii
11 Heliotropium calcareum
12 Heliotropium crispum
13 Heliotropium dasycarpum
14 Heliotropium aucheri
15 Heliotropium lamondiae