

APPENDIX

APPENDIX - I

TABLE I. The different systems of classification proposed for the families within and related to the Caryophyllales (Cronquist, Eichler - 1876 1981)

GRUPPE . Centrospermae

- | | |
|--|--|
| <p>I Reihe : Oleraceae</p> <p>1. Polygonaceae</p> <p>2. Nyctaginaceae</p> <p>3. Chenopodiaceae</p> <p>4. Amaranthaceae</p> | <p>III. Reihe : Opuntinae</p> <p>6. Phytolaccaceae</p> <p>7. Portulacaceae</p> <p>8. Aizoaceae</p> <p>9. Cactaceae</p> |
|--|--|
- II Reihe : Caryophyllinae
5. Caryophyllaceae

Eichler 1875

- II Reihe : Centrospermae
- | | |
|--|---|
| <p>1. Polygonaceae</p> <p>2. Chenopodiaceae</p> <p>3. Amaranthaceae</p> <p>4. Phytolaccaceae</p> <p>5. Thelygoneae</p> | <p>6. Nyctaginiaceae</p> <p>7. Caryophyllaceae</p> <p>8. Aizoaceae</p> <p>9. Portulacaceae</p> <p>10. Basellaceae</p> |
|--|---|

Braun - 1864

16. Ordnung . Caryophyllinae

- | | |
|--|--|
| <p>1. Nyctaginaceae</p> <p>2. Chenopodiaceae</p> <p>3. Amaranthaceae</p> <p>4. Caryophyllaceae</p> | <p>5. Phytolaccaceae</p> <p>6. Portulacaceae</p> <p>7. Aizoaceae</p> <p>8. Opuntiaceae</p> |
|--|--|

Bentham and Hooker (1865)

- | | |
|---------------------------|----------------------------|
| Sub Class : Polypetelae | 3. Cactaceae |
| Series : Thalamiflorae | 4. Aizoaceae |
| 4. Order : Caryophyllinae | Sub Class : Monochlamydeae |
| 1. Caryophyllaceae | 1. Order - Curvembryae |
| 2. Portulacaceae | 5. Nyctaginaceae |
| Series : Calyciflorae | 6. Amaranthaceae |
| 4. Order : Picoidales | 7. Chenopodiaceae |
| | 8. Polygonaceae |
| | 9. Phytolacaceae |

Hallier - 1912

Ordnung. Caryophyllinae

- | | |
|---|--------------------|
| 1. Crassulaceae | 7. Chenopodiaceae |
| 2. Phytolaccaceae | 8. Amaranthaceae |
| 3. Aizoaceae | 9. Caryophyllaceae |
| 4. Cactaceae | 10. Plumbaginaceae |
| 5. Portulacaceae (incl.
Basellaceae) | 11. Nyctaginaceae |
| 6. Didiereaceae | 12. Polygonaceae |

Bessey - 1915

ORDER - Caryophyllales

- | | |
|----------------------|--------------------|
| 1. Caryophyllaceae | 10. Phytolaccaceae |
| 2. Elatinaceae | 11. Basellaceae |
| 3. Portulacaceae | 12. Amaranthaceae |
| 4. Aizoaceae | 13. Chenopodiaceae |
| 5. Frankeniaceae | 14. Polygonaceae |
| 6. Tamaricaceae | 15. Nyctaginaceae |
| 7. Salicaceae | 16. Cynocrambaceae |
| 8. Podostemonaceae | 17. Batidaceae |
| 9. Hydrostachydaceae | |

Hutchinson (1964)

- | | |
|-------------|---------------------|
| Division I | - Lignosae |
| 20. Order | Bixales |
| | 1. Achatocarpaceae |
| 21. Order | Thymelaeales |
| | 2. Nyctaginaceae |
| 23. Order | Pittosporales |
| | 3. Stegnospermaceae |
| 32. Order | Cactales |
| | 4. Cactaceae |
| Division II | - Herbaceae |
| 62. Order | Caryophyllales |
| | 5. Elatinaceae |
| | 6. Molluginaceae |
| | 7. Caryophyllaceae |

- 8. Aizoaceae
- 9. Portulacaceae
- 63. Order - Polygonales
 - 10. Polygonaceae
 - 11. Illecebraceae
- 64. Order Chenopodiales
 - 12. Barbeuiaceae
 - 13. Phytolaccaceae
 - 14. Gyrostemonaceae
 - 15. Aydestidaceae
 - 16. Petiveriaceae
 - 17. Chenopodiaceae
 - 18. Amaranthaceae
 - 19. Cynocrambaceae
 - 20. Batidaceae
 - 21. Basellaceae
- 67. Order - Primulales
 - 22. Primulaceae
 - 23. Plumbaginaceae

ENGLER, 1964

- 1. Unterklasse : Archichlamydeae
 - 13. Reihe : Centrospermae (Chenopodiales, Caryophyllales)
 - Englers Syllabus Der Pflanzenfamilien 12. Aufl. 1961
- 1. Unterreihe - Phytolaccineae 3. Unterreihe-Caryophyllin
 - 1. Phytolaccaceae 9. Caryophyllaceae
 - (Incl. Illecebraceae
 - = Paronychiaceae)

- 2. Gyrostemonaceae
- 3. Achatocarpaceae
- 4. Nyctaginaceae
- 5. Molluginaceae
- 6. Aizoaceae(Ficoidaceae)
- 2. Unterreihe - Portulacinae
- 7. Portulacaceae
- 8. Basellaceae
- 4. Unterreihe-Chenopodineae
- 10. Dysphaniaceae
- 11. Chenopodiaceae
- 12. Amaranthaceae
- Anhang
- 13. Didiereaceae
- 12. Reihe : Polygonales
- 14. Reihe : Cactales
- 22. Reihe : Botoles (following 21, Reihe papaverales)
- 2. Unterklass Sympetaleae:
- 4. Reihe. Plumbaginales

Cronquist 1957

Caryophyllales

- 1. Phytolaccaceae
- 2. Nyctaginaceae
- 3. Aizoaceae
- 4. Portulacaceae
- 5. Basellaceae
- 6. Caryophyllaceae
- 7. Chenopodiaceae
- 8. Amaranthaceae
- 9. Polygonaceae
- 10. Thelygonaceae

Cronquist 1965

Caryophyllales (Centrospermae)

- 1. Phytolaccaceae
- 2. Nyctaginaceae
- 3. Aizoaceae
- 6. Chenopodiaceae
- 7. Amaranthaceae
- 8. Molluginaceae

- 4. Portulacaceae 9. Caryophyllaceae
- 5. Basellaceae + some allies

Certain : Cactaceae

Possible : polygonaceae, Didiereaceae, Batidaceae,
Thelygonaceae, Plumbaginaceae

Cronquist, 1968

III Subclass Caryophyllidae

I Order Caryophyllales

- 1. Phytolaccaceae (ind. Achatocorp; Agdertidac.,
Barbaceiae; Gyrostimono; peteveriac; Stegnospermac.)
- 2. Nyctaginaceae
- 3. Didiereaceae
- 4. Cactaceae
- 5. Aizoaceae (inc. Mesebryanthemac; Tetragoniac)
- 6. Molluginaceae
- 7. Caryophyllaceae (incl. Illecebrac)
- 8. Portulacaceae
- 9. Basellaceae
- 10. Chenopodiaceae (incl. Dysphaniac; Holophytac.)
- 11. Amaranthaceae

2. Order Batales

- 1. Bataceae

3. Order Polygonales

- 1. Polygonaceae

4. Order Plumbaginales

- 1. Plumbaginaceae

Cronquist 1981

sub class - Caryophyllidae	Order 2 polygonales
order - Caryophyllales	1 polygonaceae
1. Phytolaccaceae	Order 3 Plumbaginales
2. Achatocarpaceae	1 Plumbaginaceae
3. Nyctaginaceae	
4. Aizoaceae	
5. Didiereaceae	
6. Cactaceae	
7. Chenopodiaceae	
8. Amaranthaceae	
9. Portulacaceae	
10. Basellaceae	
11. Molluginaceae	
12. Caryophyllaceae	

Takhtajan 1959

Unterordnung III. Centrospermae

Ordnung 21: Caryophyllales (Phytolaccales)

1. Phytolaccaceae	10. Amaranthaceae
2. Gyrostemonaceae	11. Chenopodiaceae
3. Batidaceae	12. Molluginaceae
4. Theligonaceae	13. Aizoaceae
5. Nyctaginaceae	14. Cactaceae
6. Didiereaceae	15. Portulacaceae
7. Caryophyllaceae	16. Basellaceae
8. Dysphaniaceae	17. Simmondsiaceae
9. Halophytaceae	

Ordnung : 22: polygonales Ordnung 23: plumbaginales

Takhtajan 1966

Subclass Caryophyllidae

Super order III. Caryophyllanae

26. Order Caryophyllales

- | | |
|--------------------|---------------------|
| 1. Phytolaccaceae | 10. Portulacaceae |
| 2. Gyrostemonaceae | 11. Basellaceae |
| 3. Achatocarpaceae | 12. Didiereaceae |
| 4. Bataceae | 13. Halophytaceae |
| 5. Nyctaginaceae | 14. Hectorellaceae |
| 6. Molluginaceae | 15. Caryophyllaceae |
| 7. Aizoaceae | 16. Dysphaniaceae |
| 8. Tetragoniaceae | 17. Amaranthaceae |
| 9. Cactaceae | 18. Chenopodiaceae |

27 Order Theligonales

28 Order . Polygonales

29 Order . Plumbaginales

Takhtajan 1973

D. Unterklasse Caryophyllidae

IV. Überordnung : Caryophyllanae

27. Ordnung. Caryophyllales

- | | |
|-----------------------|---------------------|
| 1. Phytolaccaceae | 9. Portulacaceae |
| incl. Achatocarpaceae | 10. Basellaceae |
| Agdestidaceae | 11. Didieraceae |
| Barbeuiaceae | 12. Halophytaceae |
| Petiveriaceae | 13. Hectorellaceae |
| Stegnospermaceae | 14. Caryophyllaceae |
| excl. Rhabdodendron | incl. Illecebraceae |

- | | |
|---------------------------|---------------------------|
| 2. Gyrostemonaceae | 15. Vivianiaceae |
| 3. Bataceae | 16. Amaranthaceae |
| 4. Nyctaginaceae | 17. Chenopodiaceae |
| 5. Molluginaceae | incl. Dysphanaceae |
| incl. Cisekiaceae | |
| 6. Aizoaceae | |
| 7. Tetragoniaceae | |
| 8. Cactaceae | |
| 28. Ordnung - Polygonales | 29. Ordnung-plumbaginales |
| Polygonaceae | Plumbaginaceae |
| | incl. Armeriaceae |

Takhtajan 1980

Sub Class D. Caryophyllidae

Order 26 - Caryophyllales

1. Phytolaccaceae
2. Achatocarpaceae
3. Nyctaginaceae
4. Aizoaceae
5. Cactaceae
6. portulacaceae
7. Hectorellaceae
8. Basellaceae
9. Didieriaceae
10. Stegnospermaceae
11. Molluginaceae
12. Caryophyllaceae

Order 27. Polygonales

1. polygonaceae

Order 28 plumbaginales

1. plumbaginaceae

13. Amaranthaceae

14. Chenopodiaceae

Soo 1967

42 Ordnung Caryophyllales

a) Phytolaccineae (Chenopodiales)

1. Phytolaccaceae (incl. Barbeuiaceae, Stegnospermaceae,
Agdestidaceae, Petiveriaceae)

2. Gyrostemonaceae

3. Achatocarpaceae

4. Nyctaginaceae

5. Molluginaceae

6. Aizoaceae (incl. Tetragoniaceae)

b) Portulacineae

7. Portulacaceae

8. Basellaceae

c) Caryophyllineae

9. Caryophyllaceae (incl. Illecebraceae)

d) Chenopodiineae

10. Dysphaniaceae

11. Chenopodiaceae (incl. Halophytaceae)

12. Amaranthaceae

e) Theligionineae

13. Theligionaceae

f) Batidineae

14. Bataceae

g) Didierineae

15. Didieraceae

43. Ordnung Opuntiales

44. " Plumbaginales

45. " Parietiales

46. " Polygonales

Thorne 1968

Super order : Chenopodiiflorae

Order Chenopodales

Sub order . Chenopodiineae

1. Phytolaccaceae

2. Gyrostemonaceae

3. Nyctaginaceae

4. Aizoaceae (incl. Molluginaceae)

5. Cactaceae

6. Didiereaceae

7. Portulacaceae

8. Basellaceae

9. Chenopodaceae (incl. Dysphania)

10. Halophytaceae

11. Amaranthaceae

Suborder Caryophyllineae

12. Caryophyllaceae

13. Polygonaceae

Order - Betales

Bataceae

Mabry, Taylor & Turner (1963): Behnke & Turner 1971, Mabry 1967

Order - Caryophyllales

Sub order - Chenopodiineae

1. Aizoaceae (incl. Tetragoniaceae)
2. Amaranthaceae
3. Basellaceae
4. Cactaceae
5. Chenopodiaceae (incl. Dysphaniaceae)
6. Didiereaceae
7. Halophytaceae
8. Nyctaginaceae
9. Phytolaccaceae (incl. petiveriaceae)
10. Portulacaceae

Sub order - Caryophyllineae

11. Caryophyllaceae
12. Molluginaceae

Dalgren 1980

Caryophyllidlorae

Order - Caryophyllales

1. Phytolaccaceae (incl. Achatocarpaceae
Agdestidiaceae
Limeum)
2. Basellaceae
3. Portulacaceae
4. Stegnospermaceae

5. Nyctaginaceae
6. Aizoacaceae (incl. Mesembryanthemaceae
Tetragonaceae)
7. Didieriaceae
8. Cactaceae
9. Hectorellaceae
10. Halophytaceae
11. Chenopodiaceae (incl. Dysphaniaceae)
12. Amaranthaceae
13. Molluginaceae
14. Caryophyllaceae (incl. Illecebraceae)

Polygoniflorae

Polygonales - Polygonaceae

Malviflorae

Plumbaginales (Position uncertain) Limoniaceae and
Plumbaginaceae.