

Banding patterns in plant chromosomes. II. Bibliography (1970-1980) — *Anthophyta*

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Abstract

The bibliography deals mainly with papers published from 1970 until 1980. Some of them published before 1970 are also included. The list of periodicals, which served for this bibliography is given in Appendix 1.

Key words: *bibliography, banding patterns, Anthophyta*

INTRODUCTION

The present paper is a summary of results of banding pattern studies in flowering plant chromosomes. This method has been applied for about ten years, thus papers published from 1970 until 1980, it means from the beginning of application of this method are included.

Some papers published before 1970 are also listed in the bibliography. They are: 1) the first papers dealing with fluorescence techniques in the study of plant chromosomes (15, 16, 17); 2) papers concerning studies of what is called "cold-induced regions" (CIR) — obtained after treatment of chromosomes with low temperature (30, 31, 39, 40, 88); and 3) studies of heterochromatin segments (H-segments) — appearing after treatment of chromosomes with a mixture of hot HCl and acetic acid (224, 225).

Included are also references from the reviewed papers.

In 1973 Nilsson (163) published a review summarizing the results of studies of the heterochromatin banding pattern in human, animal and plant chromosomes. In Nilsson's bibliography only 13 papers involve plants. Most of them are included in the present bibliography.

Appendix 1 lists the periodicals which are basis for the present paper. Unfortunately several of them are incomplete for the lack of some particular annuals. Abbreviations used in the present paper are given in Appendix 2.

Genera and species within them are listed alphabetically. The nomenclature of genera and species as well as comments dealing with techniques and kind of bands agree with those used by authors of the particular papers.

The notation "sp." in the alphabetic list means, that the author has no information about the species.

Various kinds of bands are described by the present author in the first part of this paper (152).

<i>Actaea species</i>	fluor.	17
<i>Adoxa moschatellina</i>	C-band	77
<i>Aegilops bicornis</i>	Giem. C-band	161
<i>longissima, sharonensis</i>	Giem. C-band	161
<i>speltooides, squarrosa</i>	Giem. N-band	59
	Giem. C-band	161
<i>variabilis</i>	Giem. N-band	93
<i>Allium acuminatum,</i>		
<i>albidum</i>	Giem. C-band, fluor.	43
<i>altaicum, aobanum</i>	Giem. C-band, fluor.	253
<i>ascalonicum</i>	Giem. C-band, fluor.	253
<i>caeruleum</i>	Giem. C-band	91
<i>carinatum</i>	Giem.	262
	Giem. C-band	43
	Hy-band	71
	fluor.	244, 245, 262
<i>cepa</i>	Giem. C-band	42, 43, 60, 177, 253
	Giem.	54, 110, 219, 221
	Giem.	222, 235, 280
	C-band	24, 49, 50, 58, 220, 223
		218
	Giem. N-band	70, 71, 72
	Hy-band	4, 17, 43, 244, 253
	fluor.	
<i>cernuum</i>	Giem. C-band, fluor.	43
<i>erdelii</i>	Giem. C-band, fluor.	5
<i>farreri</i>	Giem. C-band, fluor.	43
<i>fistulosum</i>	Giem. C-band	42, 43, 253
	C-band	50
	fluor.	43, 253
<i>flavum</i>	Giem. C-band	43, 134
	Giem.	249
	Hy-band	71, 72
	fluor.	43, 249
<i>galanthum</i>	Giem. C-band	42, 43, 253
	fluor.	43, 253

<i>ledebourianum</i>	Giem. C-band, fluor.	253
<i>moly</i>	Giem. C-band, fluor.	5
<i>montanum</i>	Giem. C-band, fluor.	43
<i>neapolitanum</i>	Giem. C-band, fluor.	5
<i>oleraceum</i>	Giem. C-band, fluor.	43
<i>oreophilum</i>	Giem. C-band, fluor.	5, 43
<i>oschaninii</i>	Giem. C-band, fluor.	253
<i>paniculatum</i>	C-band, fluor.	254, 256
<i>paradoxum</i>	Giem. C-band, fluor.	5, 43
<i>proliferum</i>	C-band	49, 50
<i>pulchellum</i>	Giem. C-band, fluor.	43, 256
	C-band	256
	fluor.	246, 256, 260
<i>ramosum, rotundum</i>	Giem. C-band, fluor.	43
<i>sativum</i>	Giem. C-band	60
	Giem.	176, 184
	Fl. Silv.	184
<i>schoenoprasum</i>	Giem. C-band, fluor.	253
<i>subhirsutum</i>	Giem. C-band, fluor.	5
<i>trifoliatum</i>	Giem. C-band, fluor.	43
<i>ssp. hirsutum, trifolia-tum</i>	Giem. C-band, fluor.	5
<i>triquetrum</i>	Giem. C-band, fluor.	5, 43
<i>tuberosum</i>	Giem. C-band, fluor.	43
<i>vavilovii</i>	Giem. C-band, fluor.	43, 253
<i>wakegii</i>	Giem. C-band, fluor.	253
<i>zebdanense</i>	Giem. C-band, fluor.	5
<i>Aloë vera</i>	Giem. C-band	60
<i>Anacyclus clavatus</i>	Giem. C-band	41, 203
'coronatus', <i>depressus</i>	Giem. C-band	203
<i>latealatus, linearilobus</i>	Giem. C-band	41
<i>maroccanus, monanthos</i>	Giem. C-band	41
<i>nigellifolius,</i>	Giem. C-band	41
<i>x officinarum</i>		
(cultivated)	Giem. C-band	41
'purpurascens',		
<i>pyrethrum</i>	Giem. C-band	203
<i>pyrethrum</i> var.		
<i>depressus</i>	Giem. C-band	41
<i>pyrethrum</i> var.		
<i>pyrethrum</i>	Giem. C-band	41
<i>radiatus</i> var. <i>coronatus</i> ,	Giem. C-band	41
var. <i>purpurascens</i> ,	Giem. C-band	41
var. <i>radiatus</i>	Giem. C-band	41

<i>valentinus</i>	Giem. C-band	41, 203
<i>Anemone blanda</i>	Giem. C-band	136, 138, 141, 196, 201
	fluor.	201
<i>coronaria, cylindrica</i>	Giem. C-band	141
<i>pavoniana, riparia</i>	Giem. C-band	141
<i>virginiana</i>	Giem. C-band	141
<i>Arabidopsis thaliana</i>	Giem. C-band	1
<i>Aster ageratoides</i> (group)	—	142
<i>Avena longiglumis, pilosa</i>	ASG, BSG	277
<i>prostrata,</i>	ASG, BSG	277
<i>strigosa</i>	ASG, BSG	277
	Giem. C-band	276
<i>ventricosa, wiestii</i>	ASG, BSG	277
<i>Bellevalia dubia</i>	Giem. N-band	26
<i>Beta vulgaris</i>	C-band	97
	Giem., Orc.	96
<i>Beta</i> sp.	Car.-Giem.	95
<i>Brimeura amethystina</i>	fluor.	258
<i>fastigiata</i>	fluor.	258
<i>Brodiaea uniflora</i>	Giem.	235
<i>Chrysanthemum lineare</i>	Giem.	235
<i>makinoi, nipponicum</i>	Giem.	235
<i>Cephalanthera</i>		
<i>damasonium</i>	Giem. C-band	193
<i>longifolia</i>	Giem. C-band	193
<i>Corchorus capsularis</i>	Giem.	2
<i>olitorius</i>	Giem.	2
<i>Crepis capillaris</i>	Fl., Irc., Cold	33, 34
	ASG	195, 235
	C-band	234, 236
	fluor.	17
<i>Crinum glaucum, jagus</i>	fluor.	266
<i>macowani, natans</i>	fluor.	266
<i>purpurascens,</i>	fluor.	266
<i>zeylanicum</i>	fluor.	266
<i>Cucumis sativus</i>	Cold, Car.	240
<i>Cycas revoluta</i>	Giem. C-band	232
<i>Cymbidium</i> (hybrid)	Giem. C-band,	204
	Fl. fluor.	204
<i>Cypripedium debile</i>	Giem., fluor.	275
	Orc., F. green	274
	HCl	272, 273
<i>Dipsacus fullonum</i>	fluor.	23

<i>Elaeagnus angustifolia</i>	Fl. C-band	3
var. <i>orientalis</i> ,	Fl. C-band	3
<i>commutata</i>	Fl. C-band	3
<i>Fritillaria imperialis</i>	Hy-band	70
<i>lanceolata</i>	Giem.	195
	Cold	116, 135
<i>meleagris</i>	Hy-band	71
	Giem.	195
<i>recurva</i>	Giem.	195
<i>Fritillaria</i> sp.	Giem.	114, 115
<i>Geropogon glaber</i>	fluor.	28
<i>Gibasis consorbina</i>	Giem. C-band	103
<i>karwinskyana</i>	Giem. C-band	103
<i>Ginkgo biloba</i>	Giem. C-band	232
<i>Glycine max</i>	Giem.	117
<i>Haemanthus albiflos</i>	Fl. C-band, fluor.	264
<i>albomaculatus</i>	Fl. C-band, fluor.	264
<i>carneus, coccineus</i>	Fl. C-band, fluor.	264
<i>hyalocarpus, nelsonii</i>	Fl. C-band, fluor.	264
<i>pubescens, rotundifolius</i>	Fl. C-band, fluor.	264
<i>tigrinus</i>	Fl. C-band, fluor.	264
<i>Haplopappus gracilis</i>	Giem.	271, 235
	—	100
<i>Haplopappus</i> sp.	—	233
<i>Hepatica nobilis</i>	Giem. C-band	141
<i>Heterotropa dissita</i>	Giem.	235
<i>Hippophaë rhamnoides</i>	C-band	175
<i>Hordeum agriocritthon</i>	Giem. C-band	255
<i>bogdanii</i> ,	Giem. C-band	133
<i>brevisubulatum</i>	Giem. C-band	133
<i>bulbosum</i>	Giem. C-band	255
<i>marinum, murinum</i>	Giem. C-band	255, 256
<i>roshevitzii</i>	Giem. C-band	133
<i>spontanum, secalinum</i>	Giem. C-band	255
<i>vulgare</i>	Giem. C-band	178, 255
'Emir'	Giem. C-band	128
<i>Hordeum</i> sp.	Giem. C-band	129, 130, 131, 164
	Giem. C-band	165, 166, 255
	C-band	132
	HCl	162
<i>Hyacinthus</i> sp.	fluor.	17, 278
<i>Iris tuberosa</i>	Hy-band	72
<i>Lathyrus aphaca, cicer</i>	Giem. C-band	122

<i>clymenum</i>	Giem. C-band	122
	O-band	120
<i>latifolius</i>	C-band	25
<i>maritimus</i>	Giem. C-band	122
<i>ochrus</i>	C-band	25
<i>odoratus</i>	Giem. C-band	119, 122
	O-band	120
<i>sativus</i>	Giem. C-band	122
	O-band	120
<i>sphaericus, sylvestris</i>	Giem. C-band	122
<i>tingitanus</i>	C-band	112
<i>tuberosus</i>	Giem. C-band	122
<i>Lens culinaris</i>	Giem.	110
<i>Leopoldia comosa</i>	Giem.	9
<i>Lilium candidum</i>	fluor.	17
<i>henryi</i>	Silv.	101
<i>lancifolium</i>	C-band	217
<i>longiflorum</i>	C-band	89, 107, 108, 109
	fluor.	89, 107, 109
	Silv.	101
<i>martagon</i>	fluor.	17
<i>pardalinum</i>	C-band, fluor.	107, 109
<i>speciosum,</i>	Silv.	101
<i>speciosum x henryi</i>	Silv.	101
<i>Linum usitatissimum</i>	Silv., fluor.	201
<i>Lolium temulentum</i>	Giem.	237
<i>Lotus pedunculatus</i>	Giem.	205
<i>Luzula multiflora</i>	Giem. C-band	172
<i>purpurea</i>	Giem. C-band	172, 173
<i>Melandrium dioicum</i>	fluor.	102
<i>Najas marina</i>	Giem. C-band,	243
	Fl., fluor.	243
<i>Narcissus tazetta</i>	Giem. N-band	57
<i>Nicotiana</i> sections:		
<i>Acuminatae, Alatae</i>	HCl, lbf + Car.	149
<i>Bigelovianae, Genuinae</i>	HCl, lbf + Car.	149
<i>Noctiflorae, Nudicaules</i>	HCl, lbf + Car.	149
<i>otophora</i>	C-band	150
sections: <i>Paniculatae</i>	HCl, lbf + Car.	149
<i>Repandaes, Rusticae</i>	HCl, lbf + Car.	149
<i>Suaveolentes,</i>	HCl, lbf + Car.	149
<i>Thyrsiflorae</i>	HCl, lbf + Car.	149
<i>Trigonophyllae,</i>	HCl, lbf + Car.	149
<i>Tomentosae</i>	HCl, lbf + Car.	149

<i>Undulatae</i>	HCl, lbf + Car.	149
<i>Nigella arvensis</i>	Giem. C-band	65
<i>damascena</i>	Giem. C-band	65, 106, 137
	Giem.	157
	fluor.	156
<i>doerfleri</i>	Giem.	140
<i>hispanica, integrifolia</i>	Giem. C-band	65
<i>orientalis, sativa</i>	Giem. C-band	65
<i>Ornithogalum caudatum</i>	fluor.	197, 199, 200, 201
<i>montanum</i>	Giem. N-band	26
	fluor.	14
	—	263
<i>oliganthum</i>	fluor.	259
<i>seineri</i>	Giem. N-band	218
<i>virens</i>	Giem.	222
	C-band	69, 223
<i>Paeonia tenuifolia</i>	Giem.	54
<i>Paris polyphylla</i>	Cold	30
	fluor.	48
<i>Pennisetum typhoides</i>	Giem. C-band	167
<i>Petunia hybrida</i>	fluor.	215, 216
<i>Phaseolus coccineus</i>	Giem. Fl.	38, 51
	Giem.	52, 53, 195
	Giem. C-band, Silv.	202
	fluor.	21, 22, 198
<i>vulgaris</i>	Giem. C-band	155
	Giem. fluor.	198
<i>Pinus densiflora</i>	Giem. C-band	232
<i>mugo</i>	fluor.	201
<i>Pisum sativum</i>	fluor.	17
<i>Plantago ovata</i>	C-band	220
<i>Polygonatum odoratum</i>	Giem. C-band	126
<i>Puschkinia scilloides</i>	C-band	75, 78
<i>Ranunculus ficaria</i>	Giem.	139
<i>japonicus</i>	Giem.	235
<i>Rhoeo discolor</i>	Giem. N-band	218
	Giem.	219
	C-band, fluor.	160
<i>Scadoxus katherinae</i>	Fl. C-band, fluor.	264
<i>magnificus, multiflorus</i>	Fl. C-band, fluor.	264
<i>natalensis, puniceus</i>	Fl. C-band, fluor.	264
<i>Scilla amoena</i>	Giem. Hy-band	72
	Giem. C-band	80
<i>bifolia, drunensis</i>	Giem.	79, 80

<i>hohenackeri</i> (group),	C-band	75, 78
<i>persica</i>	C-band	75, 78
<i>ingridae,</i>	Giem. C-band	80
<i>mischtschenkoana</i>	Giem. C-band	80
<i>mordakiae</i>	Giem. C-band	80
<i>sibirica</i>	Giem. C-band	80, 257
	C-band	183
	C-band, Fl.	248
	C-band, Orc.	247
	Cold	6, 116
	Hy-band	71
	fluor.	17, 47, 183, 197, 199
	fluor.	200, 248
	Giem.	76, 79
	Giem.	212, 214
	Giem. C-band	7
	—	210
<i>vindobonensis</i>	Giem. C-band	7
<i>Secale africanum</i>	Giem.	207
	Giem. C-band	7
	Az-e	19
<i>ancestrale</i>	Giem. C-band	7
<i>cereale</i>	Giem.	151, 188, 189, 190, 207
	Giem.	211, 212, 214, 250, 265
	Giem. C-band	7, 125, 159, 178, 179, 196, 209
	C-band	67, 68, 74, 206, 223, 239
	Giem. N-band	57
	fluor.	201, 206, 250
	Az-e	19
<i>dighoricum</i>	Giem. C-band	7
<i>montanum</i>	Giem.	212, 214
	C-band	83
	Az-e	19
<i>montanum</i>	Giem. C-band	7
ssp. <i>dalmaticum</i>	Giem. C-band	7
ssp. <i>kuprianovii</i>	Giem. C-band	7
ssp. <i>montanum</i>	Giem.	207
<i>segetale</i>	Giem. C-band	7
	Az-e	19

<i>silvestre</i>	Giem.	212
	Giem. C-band	7, 256
	Az-e	19
<i>vavilovii</i>	Giem. C-band	7, 256
	Giem.	212, 214
<i>anatolicum</i>		
<i>x kuprianovii</i>	Az-e	208
<i>cereale x vavilovii</i>	Az-e	208
<i>dighoricum</i>	Az-e	19, 208
<i>x montanum</i>		
<i>vavilovii x montanum</i>	Az-e	208
<i>Secale</i> sp.	Giem.	111, 207, 213, 238, 242, 265, 269, 279
	Giem. C-band	37, 61, 94, 182, 270
	C-band	8, 66, 87, 127
	fluor.	182
<i>Shepherdia argentea,</i>	Fl. C-band	3
<i>canadensis</i>	Fl. C-band	3
<i>Solanum chacoense</i>	Giem.	124
<i>Solanum</i> sp.	Giem.	123, 154
<i>Spiranthes sinensis</i>	Giem.	235
<i>Suaeda maritima</i>	Giem.	235
<i>Tradescantia edwardsiana</i>	Giem. N-band	218
<i>Tragopogon crocifolius</i>	fluor.	28
<i>dubius</i>	Giem. fluor.	29
<i>eriospermus, porrifolius</i>	fluor.	28
<i>pratensis</i>	Giem. fluor.	29
<i>Trigonella</i>		
<i>foenum-graecum</i>	Giem. C-band	121
<i>Tillium camschatcense</i>	Fl. Cold	82
<i>cernuum,</i>	Cold	39, 40
<i>chloropetalum</i>	Cold	15, 31, 39, 40
<i>erectum</i>	Giem., Fl., C-band	18
	fluor.	15
<i>grandiflorum</i>	Giem.	195
	Giem., Fl., C-band	18
	Cold	12, 31, 39, 40
	HCl, Fl.	56
<i>kamtschaticum</i>	Giem.	230, 241
	Orc., F. green	274
	Fl., Giem., Silv.	241
	Cold	31, 39, 40, 88, 113
<i>luteum</i>	Cold	39, 40

<i>rhombifolium</i>	Cold, Fl.	81
<i>recurvatum, rivale,</i>		
<i>sessile</i>	Cold	31, 39, 40
<i>smallii, stylosum</i>	Cold	31, 39, 40
<i>Triticale</i>	Giem.	145, 146, 147, 148, 151
	Giem.	186, 187, 207, 269
	Giem. C-band	32, 37, 84, 159, 178
	C-band	8, 87, 158, 174
	Fl.	268
<i>Triticum aestivum</i>	Giem. C-band	62, 161, 171, 178, 281
	Giem. N-band	59, 93
<i>boeticum, dicoccoides</i>	Giem. N-band	59
<i>dicoccum</i>	Giem. C-band	161
	Giem. N-band	59
<i>durum</i>	Giem. N-band	59
<i>monococcum</i>	Giem. C-band	62, 161
	Giem. N-band	59
<i>speltoides, tauschii</i>	Giem. C-band	62
<i>turgidum</i> cv. '20'	Giem. C-band	84
<i>uratru</i>	Giem. N-band	59
<i>Triticum</i> sp.	Giem. C-band	64
	Giem.	151, 269
	C-band	8, 83, 85, 159
<i>Triticum x Hordeum</i>	N-band	92
<i>Triticale x Secale cereale</i>	C-band	99
<i>Tulbaghia alliacea</i>	fluor.	244, 246, 260
<i>cernua</i>	Cold, Fl.	252
	Giem. C-band	256
<i>leucantha</i>	fluor.	246, 251, 262
	Giem. C-band	256
	Giem.	262
<i>pulchella</i>	fluor.	244
<i>Tulipa gesneriana</i>	Giem.	46
'Queen of Night'	Giem.	45
'Spring song',	Giem.	45
'Turkestanica'	Giem.	45
<i>Tulipa</i> sp.	Giem.	10, 11
	fluor.	47
<i>Vicia bithynica,</i>	C-band	25
<i>dasycarpa</i>		
<i>faba</i>	Giem. C-band	13, 106, 168, 172, 178
	Giem. N-band	26, 57
	N-band	143, 191

	Giem.	35, 54, 195, 231, 235, 261, 280
	C-band	36, 73, 74, 169
	O-band	118
	Cold	20, 44, 144, 227, 228, 229
	Cold, Fl.	194, 227, 228
	Hy-band	73
	HCl-band	224, 226, 227, 229
	TCA-band, Fl.	225
	FPG-band	104, 192
	Az-c band	55
	fluor.	15, 16, 17, 20, 36, 98, 156, 169, 185, 199, 244, 246, 260, 261
<i>hirsuta</i>	O-band	118
<i>hybrida, lutea</i>	C-band	25
<i>melanops</i>	C-, N-, Hy-band, fluor.	27
<i>pannonica</i>	C-band	25
<i>sativa</i>	O-band	118
<i>Zea mays</i>	Giem. C-band	178
	Giem. N-band	57
	C-band	267
	fluor.	90
<i>Zea</i> sp.	Giem. C-band	170, 181
	Giem.	86, 180
	fluor.	153
Cereals in general	Giem.	63, 105

APPENDIX 1

LIST OF JOURNALS

- Acta Botanica Sinica (1973-1980)
 Acta Horti Pisani (1970-1978/79)
 Acta Phytotaxonomica Sinica (1974-1980)
 American Journal of Botany (1970-1980)
 Annali di Botanica (1970/71-1980)
 The Botanical Magazine, Tokyo (1970-1980)
 Botaniska Notiser (1970-1980)
 Canadian Journal of Genetics and Cytology (1970-1980)
 Caryologia (1970-1980)
 Chromosoma (1970/71-1980)
 Crop Science (1970-1980)

Current Science (1970-1980)
Cytology (USSR) (1970-1980)
Experimental Cell Research (1970-1980)
Genetica (Netherlands Journal of Genetics) (1970-1980)
Genetica (USSR) (1970-1980)
Giornale Botanico Italiano (1970-1980)
Hereditas (1970—1980)
Journal of Heredity (1970-1980)
Journal of Cell Science (1970-1980)
Proceedings of the Academy of Natural Sciences of Philadelphia
(1972-1980)
Protoplasma (1970-1980)
Plant Systematics and Evolution (1970-1980)
Taxon (1970-1980)

APPENDIX 2

THE LIST OF ABBREVIATIONS USED IN DESCRIPTION OF BANDING METHODS

ASG — acetic acid, saline, Giemsa
Az-c — azacytidin
Az-e — azure eosin
BSG — barium hydroxide, saline, Giemsa
Car — carmine
Car-Giem — carmine-Giemsa
Cold — cold-induced
F. green — fast green
Fl. — Feulgen
fluor. — fluorescence techniques
FPG — fluorescence plus Giemsa
Giem. — Giemsa techniques
HCl — hot muriatic acid
lbf+Car — leuco-basic fuchsin plus carmine
Orc — orceine
Silv. — silver
TCA — trichloroacetic acid
— — not mentioned method

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Wzory prążkowe chromosomów roślinnych. II. Bibliografia (1970-1980) — Anthophyta

Streszczenie

Niniejsza bibliografia zawiera głównie literaturę dotyczącą wzorów prążkowych na chromosomach roślinnych, opublikowaną w latach 1970-1980. Została również włączona większość pozycji opublikowanych przed 1970 rokiem. Spis czasopism, które były podstawą do sporzązonej bibliografii jest zamieszczony w dodatku nr 1.

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