The List of Bird Species found at the Gurukula Botanical Sanctuary, arranged according to observed habitat preferences.

This list is an adaptation of that compiled by Alan H. Morley which is based on his sightings and recordings made during his regular winter visits to GBS of the last 13 years.

In addition field observations and recordings of bird sightings by sanctuary staff have been carried out both generally over time and more specifically in 2 short monsoon studies and one in late winter (see ref). The information gathered is summarised on the following table in which species have been arranged in according to their observed habitat preference and notes have been included to describe their status at the sanctuary.

The land under care of GBS has been classified into the following rough habitat types: Old Forest; Young Forest; Orchard; Marsh; River; Lemongrass (shrub); Shrub; Disused Tea Plantation; and Garden (see map).

The nomenclature and order is used according to the recent publication by the Bombay Natural History Society of Manakadan and Pittie's 'Standardized English and Scientific Names of the Birds of the Indian Subcontinent' (see references).

For identification purposes and where additional information was required Inskipp et al's 'Birds of the Indian Subcontinent' was referred to.

Old Forest	
Species	Notes
1. Black Baza Aviceda leuphotes	Rare, resident. Seen on edges of reserve forest.
2. Oriental Honey-Buzzard Pernis ptilorhynchus	Uncommon, resident. Occasional sightings in flight
3. Crested Serpent-Eagle Spilornis cheela.	Common, resident. Seen and heard daily. Usually near water source
4. Crested Goshawk Accipiter trivirgatus	Common (small numbers), breeding, resident. Often found roosting near lower Crenita pond
5. Besra Sparrowhawk Accipiter virgatus	Common, resident. Occasional sightings
6. Black Eagle Ictinaetus malayensis	Uncommon, resident. Occasional sightings in flight
7. Rufous-bellied Eagle Hieraaetus kienerii	Rare. One period of sightings in 2000

8. Mountain Hawk-Eagle Spizaetus nipalensis	Rare. Only two sightings
9. Eurasian Hobby	Rare, winter visitor
Falco subbuteo	raic, winter visitor
10. Grey Junglefowl	Common, breeding, resident. Often heard
Gallus sonneratii	in forest
11. Eurasian Woodcock	Rare, winter visitor. Very few sightings in
Scolopax rusticola	marshy forest areas
12. Nilgiri Wood Pigeon.	Uncommon
Columba elphinstonii	
13. Pompadour Green-Pigeon	Common, resident. Seen on tree-tops near
Treron pompadora	river
14. Yellow-legged Green-Pigeon	Uncommon.
Treron phoenicoptera	
15. Green Imperial Pigeon	Uncommon, resident. Heard more than
Ducula aenea	seen
16. Mountain Imperial Pigeon	Common, resident. Seen in tall forest only
Ducula badia	
17. Alexandrine Parakeet	Rare, resident. Occasional sightings
Psittacula eupatria	
18. Rose-ringed Parakeet	Rare, resident. Occasional sightings
Psittacula krameri	
19. Blue-winged Parakeet	Common, resident. Often sighted and
Psittacula columboides	heard flying over or feeding on erythrina
20. Pied Cuckoo	Rare. Infrequent sightings
Clamator jacobinus	TT TO THE TOTAL TOTAL TO THE TH
21. Large Hawk-Cuckoo	Uncommon, winter visitor. Few sightings
Hierococcyx sparverioides	only Pero Formariantings
22. Indian Cuckoo Cuculus micropterus	Rare. Few winter sightings
23. Banded Bay Cuckoo	Rare. Few winter sightings
Cacomantis sonnerati	Raic. I cw winter signtings
24. Indian Plaintive Cuckoo	As above
Cacomantis passerinus	110 400 10
25. Forest Eagle-Owl	Rarely seen. Few records
Bubo nipalensis	
26. Jungle Owlet	Often heard at night. Distinctive call
Glaucidium radiatum	
27. Brown Hawk-Owl	Resident. Occasional sightings by river
Ninox scutulata	

28. Ceylon Frogmouth	Common, resident. Hard to see but heard
Batrachostomus moniliger	daily at dusk
29. White-rumped Needletail-Swift Zoonavena sylvatica	Infrequent sightings
30. Brown-backed Needletail-Swift	Several sightings early 2000
Hirundapus giganteus	
31. Malabar Trogon	Resident. Small numbers. Shy & usually
Harpactes fasciatus	only heard
32. Oriental Broad-billed Roller	Rare. Single birds sighted infrequently
Eurystomus orientalis	
33. Malabar Grey Hornbill	Common, resident. Distinctive call & often
Ocyceros griseus	seen
34. Malabar Pied Hornbill	Rare. One sighting in forest
Anthracoceros coronatus	
35. Crimson-throated Barbet	Common, resident. Often heard but hard to
Megalaima rubricapillus	see. Call is a Poop poop poop from treetops
36. Great Black Woodpecker	Uncommon, resident. Small population,
Dryocopus javensis	occasional sightings
37. Common Golden-backed	Rare, resident. Few sightings
Woodpecker	
Dinopium javanense	
38. Greater Golden-backed	Common, resident. Regularly heard & seen
Woodpecker	
Chrysocolaptes lucidus	
39. Forest Wagtail	Rare, resident. Hard to find
Dendronanthus indicus	
40. White-bellied Minivet	Rare. Infrequent sightings
Pericrocotus erythropygius	
41. Scarlet Minivet	Common, resident, breeding. Often seen.
Pericrocotus flammeus	
42. Large Woodshrike	Common, resident.
Tephrodornis gularis	
43. Grey-headed Bulbul	Common, resident, breeding. Shy & hard
Pycnonotus priocephalus	to see. Usually found near river
44. Yellow-browed Bulbul	Common, resident, breeding. Seen daily.
Iole indica	
45. Asian Fairy Bluebird	Common, resident. Heard more than seen.
Irena puella	
46. Blue-headed Rock-Thrush	Rare. Winter visitor. Occasional sightings
Monitcola cinclorhynchus	

47. Malabar Whistling Thrush <i>Myiophonus horsfieldii</i>	Common, resident. Located by call. Found near to ground in forest
48. Pied Thrush Zoothera wardii	Rare. Winter visitor. Very few sightings
49. Orange-headed Thrush Zoothera citrina cyanotus	Common, resident. Racial variant.
50. Scaly Thrush Zoothera dauma	Rare. Very few sightings
51. Eurasian Blackbird Turdus merula	Common, winter visitor
52. Dark-throated Thrush Turdus ruficollis ruficollis	Very rare. One sighting
53. White-bellied Shortwing Brachypteryx major	Uncommon. Few sightings each year
54. White-rumped Shama Copsychus malabaricus	Rare. Only a few sightings
55. Wynaad Laughingthrush Garrulax delesserti	Uncommon, resident. Usually only heard
56. Spotted Babbler Pellorneum ruficeps	Common, resident, breeding. Skulks on ground. Heard daily
57. Black-headed Babbler Rhopocichla atriceps	Common, resident, breeding. Seen daily in small chattering parties in undergrowth
58. Quaker Tit-Babbler Alcippe poioicephala	Resident. Small numbers. Usually seen near river
59. Greenish Leaf-Warbler Phylloscopus trochiloides	Small numbers, winter visitor.
60. Western Crowned Warbler Phylloscopus occipitalis	As above
61. Asian Brown Flycatcher <i>Muscicapa dauurica</i>	Common, resident, breeding.
62. Rusty-tailed Flycatcher Muscicapa ruficauda	Small numbers, winter visitor
63. Brown-breasted Flycatcher Muscicapa muttui	As above. Non-descript brown colouration. Hunts from low down perches. Usually near river
64. Verditer Flycatcher Eumyias thalassina	Uncommon, winter visitor. Seen in trees on edge of forest
65. Nilgiri Flycatcher <i>Eumyias albicaudata</i>	Uncommon, resident. Endemic. Hunts from tree canopy usually near river

66. White-bellied Blue Flycatcher Cyornis pallipes	Common, resident, probably breeding. Endemic. Found in understory of forested lower garden
67. Asian Paradise Flycatcher <i>Terpsiphone paradisi</i>	Partial migrant. Small numbers in winter. Very active. Seen in shady riverside, wooded vegetation
68. White-throated Fantail <i>Rhipidura albicollis</i>	Rare. Few sightings only.
69. Chestnut-bellied Nuthatch Sitta castanea	Uncommon, resident. Small population. Occasional sightings.
70. Velvet-fronted Nuthatch Sitta frontalis	As above
71. Thick-billed Flowerpecker Dicaeum agile	Common, resident, breeding.
72. Tickell's Flowerpecker Dicaeum erythrorhynchos	Common, resident.
73. Plain Flowerpecker Dicaeum concolor	As above. Hard to distinguish between flowerpeckers. Often seen in tree-tops near river
74. Oriental White-eye Zosterops palpebrosus	Common, resident, breeding. Large groups seen and heard regularly
75. Grey-headed Starling Sturnus malabaricus	Uncommon. Small parties seen occasionally. Seen in tall trees near river
76. Jungle Myna <i>Acridotheres fuscus</i>	Common, resident. Feeding parties often seen around Manicherry marsh
77. Hill Myna Gracula religiosa	Common, resident. Often seen and heard in tree-tops around sanctuary
78. Black-naped Oriole Oriolus chinensis	Uncommon, winter visitor. Occasional sightings.
79. Black-headed Oriole Oriolus xanthornis	Rare. Few sightings only
80. Ashy Drongo Dicrurus leucophaeus	Uncommon. Infrequent sightings
81. White-bellied Drongo Dicurus caerulescens	Rare. Few sightings only
82. Bronzed Drongo Dicrurus aeneus	Common, resident, breeding. Seen daily around the sanctuary
83. Greater Racket-tailed Drongo Dicrurus paradiseus	Common, resident, breeding. Very active, noisy bird. Seen and heard daily around sanctuary

84. White-bellied Treepie	Common, resident, breeding. Stays mainly
Dencrocitta leucogastra	in the most wooded areas
Young	Forest
Species	Notes
1. Shikra	Resident. Small numbers. Can be seen
Accipiter badius	hunting in the Shola
2. Eurasian Sparrowhawk	Uncommon, winter visitor.
Accipiter nisus	
3. Red Spurfowl	Common, resident, breeding. Very shy but
Galloperdix spadicea	can be heard and seen scratching in leaf- litter
4. Indian Jungle Nightjar	Very few sightings. Hard to observe and
Caprimulgus indicus	identify resident Nightjars due to time of activity
5. Speckled Piculet	Uncommon. Very few sightings.
Picumnus innominatus	
6. Brown-capped Pygmy Woodpecker	Rare. Few sightings only
Dendrocopos nanus	
7. Rufous Woodpecker	Uncommon, resident. Occasional sightings
Celeus brachyurus	
8. Heart-spotted Woodpecker	Common, resident, breeding. Often seen in
Hemicircus canente	small parties around sanctuary
9. Black-headed Cuckoo-Shrike	Rare. Few sightings only in tree-tops
Coracina melanoptera	
10. Black-crested Bulbul	Common, resident, breeding. Racial variant
Pycnonotus melanicterus gularis	found here – 'Ruby-throated Bulbul'
11. Jerdon's Chloropsis	Uncommon, resident. Occasional sightings
Chloropsis cochinchinensis 12. Rufous-backed Shrike	Dara Two sightings only
Lanius schach	Rare. Two sightings only
13. Blue Rock-Thrush	Rare, winter visitor. Very few sightings
Monticola solitarius	reare, winter visitor. Very few signiffigs
14. Indian Scimitar Babbler	Common, resident. Shy skulker, but
Pomatorhinus horsfieldii	distinctive call identifies it. Heard daily
15. Large-billed Leaf Warbler	Common, winter visitor.
Phylloscopus magnirostris	Tomas Tartor
16. Brahminy Starling	Uncommon, resident. Occasional sightings
Sturnus pagodarum	of small parties
	•
Orc	hard

Species	Notes
1. Spotted Dove	Common, resident, breeding. Tame and
Streptopelia chinensis	often found near the kitchen
2. Emerald Dove	Common, local migration, breeding. Shy,
Chalcophaps indica	fast-flying bird, often seen in Manicherry orchard
3. Indian Hanging-Parrot	Common, resident. Seen and heard daily
Loriculus vernalis	(Call is a Tsip-tsip in flight) around sanctuary
4. Brainfever Bird	Uncommon, resident. Occasional sightings
Hierococcyx varius	in Manicherry orchard. Hawk-like appearance
5. Asian Koel	Uncommon, resident. Occasionally heard
Eudynamys scolopacea	and seen.
6. Small Bee-Eater	Uncommon, resident, local movements.
Merops orientalis	Small parties seen in Manicherry valley occasionally
7. Blue-tailed Bee-Eater	As above
Merops philippinus	
8. Chestnut-headed Bee-Eater	As above
Merops leschenaulti	
9. Indian Roller	Rare. Very few sightings
Coracias benghalensis	
10. Common Hoopoe	Very Rare. One record only
Upupa epops	
11. White-cheeked Barbet	Common (abundant), resident, breeding.
Megalaima viridis	Seen and heard daily. Unmistakable repetitive call.
12. Small Yellow-naped Woodpecker	Uncommon, resident. Occasional sightings
Picus chlorolophus	
13. Large Cuckoo-Shrike	Rare, resident. Infrequent sightings. Hard
Coracina macei	to find
14. Black-winged Cuckoo-Shrike	Very rare. One record only.
Coracina melaschistos	
15. Ashy Minivet	Rare, resident. Few sightings in tree-tops
Pericrocotus divaricatus	
16. Pied Flycatcher-Shrike	Common, resident, breeding. Can be seen
Hemipus picatus	around sanctuary
17. Red-vented Bulbul	Uncommon, resident, breeding. Very small
Pycnonotus cafer	numbers. Can be found in orchard near river

18. Black Bulbul	Uncommon, resident, breeding. Infrequent
Hypsipetes leucocephalus	sightings in Manicherry orchard near river
19. Common Iora	Common, resident, breeding. Can be seen
Aegithina tiphia	and heard daily around sanctuary
20. Gold-fronted Chloropsis	As above
Chloropsis aurifrons	715 400 00
21. Oriental Magpie Robin	Small, resident population. Can be found
Copsychus saularis	mostly by at Manicherry
22. Common Tailorbird	Common (but small population), resident,
Orthotomus sutorius	breeding. Hard to see but noisy call.
23. Yellow-browed Warbler	Small numbers, winter visitor.
Phylloscopus inornatus	
24. Blue-throated Flycatcher	Uncommon, winter visitor.
Cyornis rubesuloides	, i
25. Tickell's Blue-Flycatcher	Common, resident. Can often be found in
Cyornis tickelliae	the Orchard around paddyfield
26. Black-naped Monarch-Flycatcher	Common, resident. Most commonly seen
Hypothymis azurea	flycatcher around sanctuary
27. Black-lored Yellow Tit	Uncommon (small numbers), altitudinal
Parus Xanthogenys	movements.
28. Loten's Sunbird	Uncommon, resident. Occasional sightings
Nectarinia lotenia	
29. Common Myna	Uncommon. Seen infrequently in mixed
Acridotheres tristis	Myna feeding parties
30. Eurasian Golden Oriole	Common, winter visitor. Seen daily in dry
Oriolus oriolus	season
31. Black Drongo	Common, resident. Seen around sanctuary
Dicrurus macrocercus	
32. Ashy Woodswallow	Uncommon, resident. Periodic small
Artamus fuscus	parties seen above trees
33. Indian Treepie	Rare, occasional visitor
Dendrocitta vagabunda	
34. Jungle Crow	Common, resident. Seen daily around
Corvus macrorhynchos	sanctuary
	_
	arsh
Species	Notes
1. Large Egret	Uncommon, resident. Few sightings only
Casmerodius albus	in Manicherry marsh
2. Median Egret	Uncommon, resident. Occasional sightings
Mesophyx intermedia	in Manicherry marsh

IXIVCI	
River	
feeding parties	
Rare. Occasionally seen in mixed Myna	
visitor.	
Uncommon (small numbers), winter	
oncommon, resident. Occasional signtings	
Uncommon, resident. Occasional sightings	
sightings in marsh areas	
Small numbers, winter visitor. Regular	
commonly seen kingfisher around	
Common (small numbers), resident. Most	
Rare, winter visitor. Few sightings only	
Rare, passage migrant. Few sightings only	
Uncommon, winter visitor.	
Rare, winter visitor.	
sightings	
Uncommon, winter visitor. Occasional	
marsh areas on occasion	
Uncommon, winter visitor. Flushed from	
daily in Manicherry	
Common (small numbers), resident. Seen	
and the second of the panel from	
Rare. One sighting only in paddyfield	
regularly in marsh areas	
Common (small population), resident. Seen	
very face. One signifing	
Very rare. One sighting	
icare. I ew signtings only	
Rare. Few sightings only	
paddyfield	
Common, resident. Can always be seen in	
Common, resident. Always to be found accompanying cattle in Manicherrry	

1. Little Cormorant	Uncommon, resident. Occasional sightings
Phalacrocorax niger	along the river
2. Little Egret	Common, resident. Regular sightings along
Egretta garzetta	river
3. Purple Heron	Rare. Very few sightings
Ardea purpurea	Raic. Very iew signings
4. Black Bittern	Rare. Very few sightings on river bank
Dupetor flavicollis	raie. Very few signtings on fiver bank
5. Spot-billed Duck	Rare. One sighting only
Anas poecilorhyncha	raic. One signing only
6. Brown Fish-Owl	Common (small numbers), resident,
Ketupa zeylonensis	breeding. Regular sightings at river
7. Small Blue Kingfisher	Uncommon, resident.
Alcedo atthis	
8. Blue-eared Kingfisher	Rare. Very few sightings only
Alcedo meninting	
9. Oriental Dwarf Kingfisher	Uncommon, resident. Occasional sightings
Ceyx erithaca	
10. Stork-billed Kingfisher	Common (small numbers), resident.
Halcyon capensis	Frequent sightings at river
11. Black-capped Kingfisher	Uncommon, resident. Occasional sightings
Halcyon pileata	
12. Lesser Pied Kingfisher	Rare. Very few sightings
Ceryle rudis	
13. Grey Wagtail	Uncommon, winter visitor. Occasional
Motacilla cinerea	sightings on exposed rocks in river and in
	paddyfield
14. Large Pied Wagtail	Uncommon (small numbers), resident.
Motacilla maderaspatensis	
15. Blyth's Reed-Warbler	Small numbers, winter visitor. Mainly by
Acrocephalus dumetorum	river
16. Indian Great Reed-Warbler	One record only
Acrocephalus stentoreus	
17. Thick-billed Warbler	Small numbers, winter visitor. Mainly by
Acrocpehalus aedon	river
т	(Cl., 1.)
	rass (Shrub)
Species 1 DI LI	Notes
1. Black-shouldered Kite	Uncommon (small numbers), resident.
Elanus caerulens	Occasionally seen hovering or hunting
	from perch over lemongrass field

2. Pied Harrier	Rare, winter visitor. Occasional sightings
Circus melanoleucos	flying low over lemongrass
3. Grey Francolin	Uncommon (small population), resident.
Francolinus pondicerianus	Hard to find
4. Rain Quail	Small numbers, resident. Infrequent
Coturnix coromandelica	sightings
5. Blue-breasted Quail	Two sightings only
Coturnix chinensis	
6. Singing Bush-Lark	Rare, resident. Very few sightings
Mirafra cantillans	
7. Eastern Skylark	Rare, resident (local movements). Irregular
Alauda gulgula	sightings
8. Brown Rock Pipit	Uncommon, resident. Few sightings only
Anthus similis	
9. Rufous-bellied Babbler	Uncommon, resident, breeding. Occasional
Dumetia hyperythra	sightings of parties
10. Indian Rufous Babbler	Common (small numbers), resident,
Turdoides subrufus	breeding. Often seen in noisy parties in
	lemongrass
11. Golden-headed Fantail-Warbler	Small numbers, resident. Occasional
Cisticola exilis	sightings
12. Jungle Prinia	Uncommon, resident. Infrequent sightings
Prinia sylvatica	
13. Ashy Prinia	Uncommon, resident. Irregular sightings
Prinia socialis	
14. Pale Grasshopper-Warbler	New record. No information
Locustella naevia	
15. Broad-tailed Grass-Warbler	Uncommon, resident. Endemic to Western
Schoenicola platyura	Ghats
16. Crested Bunting	Rare. Two records
Melophus lathami	
17. Common Rosefinch	Uncommon (small numbers), winter
Carpodacus erythrinus	visitor.
18. Red Munia	Common, resident. Small flocks often seen
Amandava amandava	
19. Green Munia	Very rare. Passing migrants in late winter
Amandava formosa	months.
20. White-rumped Munia	Common, resident, breeding. Seen often in
Lonchura striata	flocks around the sanctuary
21. Black-throated Munia	Uncommon, resident. Occasionally seen
Lonchura kelaarti	amongst White-rumped Munias

Shrub		
Species	Notes	
1. Greater Coucal	Common (small numbers), resident,	
Centropus sinensis	breeding. Unmistakable call heard daily	
	around sanctuary	
2. Red-whiskered Bulbul	Common, resident, breeding. Seen daily	
Pycnonotus jocosus	(most common bird)	
3. Grey-breasted Laughingthrush	Rare. Few sightings only	
Garrulax jerdoni		
4. Booted Warbler	Rare, winter visitor. Few sightings only	
Hippolais caligata		
5. Orphean Warbler	Rare. Two sightings only	
Sylvia hortensis		
6. White-rumped Shama	Rare. Few records only	
Copsychus malabaricus		
7. Isabelline Wheatear	Very rare. One record only	
Oenanthe isabellina	D T :14: 1	
8. Pied Tit	Rare. Two sightings only	
Parus nuchalis		
Disused 7	Геа Plantation	
species	notes	
1. Pallid Harrier	Uncommon, winter visitor. Occasional	
Circus macrourus	sightings	
2. White-eyed Buzzard	Uncommon, resident. Occasional sighting	
Butastur Teesa		
3. Common Kestrel	Rare. Two records only	
Falco tinnunculus	-	
4. Indian Robin	Rare. Few sightings only	
Saxicoloides fulicata		
5. Pied Bushchat	Common (small numbers), resident	
Saxicola caprata	breeding. Usually seen from tower road	
6. Franklin's Prinia	Uncommon (fluctuating numbers),	
Prinia hodgsonii	resident. Occasional sightings of small	
	flocks	
7. Spotted Munia	Uncommon, resident. Small flocks seen at	
Lonchura punctulata	times and often part of mixed Munia	
Lonentia punctulata		
Lonentia punctulata	parties	

Species	notes
1. Indian Pitta	Common (small numbers), winter visitor.
Pitta brachyura	Shy and hard to find. Seen scratching leaf-
	litter
2. Indian Blue Robin	Uncommon, resident. Occasional sightings
Luscinia brunnea	on ground by Crenita ponds at dusk
3. Purple-rumped Sunbird	Common, resident, breeding. Seen around
Nectarinia zeylonica	flowering plants in gardem
4. Small Sunbird	As above. Endemic to Western Ghats
Nectarinia minima	
5. Purple Sunbird	Common, resident (local movements),
Nectarinia asiatica	breeding.
6. Crimson Sunbird	Rare. Very few sightings
Aethopyga siparaja	
7. Little Spiderhunter	Common, resident, breeding. Seen and
Arachnothera longirostra	heard daily around garden

Further information

Not all the species that have been sighted here have been included in the list such as those that are only seen in flight and those about which not enough is known.

It is important to acknowledge that most birds move about freely and are not restricted to a particular location on this scale, so 'cross-overs' between the habitat types are always likely. Certain species resident here such as the effervescent Red-whiskered Bulbul can be found in all areas. Other species are more specific in their requirements such as the White-bellied Blue-Flycatcher which stays predominantly in the understory of the most wooded areas. Even sitting in the inhabited and garden area of the sanctuary one can see significant proportion of all the birds found here particularly when and action-packed 'hunting party' passes by, and thus the limitations of such a list become clear. With this in mind one should see the list only for the guideline it is intended to be, as more detailed studies could be conducted to reveal the extent to which a species is dependent on (or not) a habitat type. Also, the list is on the whole particular to the sanctuary so the groupings may not be the same elsewhere.

The best places to watch and enjoy the diverse bird life here are down by the river near Manicherry, the orchards and the wooded garden areas.

References

Inskipp et al; 1998; 'Birds of the Indian Subcontinent'; Oxford University Press, New Delhi, India

Manakadan, R. & Pittie, A.; 2001; 'Standardized English & Scientific Names of the Birds of the Indian Subcontinent'; Bombay Natural History Society

Morley, A.H.; 2001; 'Botanical Sanctuary Bird List – 1990-2001'.

Morley, A.H.; 2002; 'Gurukula Botanical Sanctuary Bird Report – 2001-2002'

Vijay's Monsoon bird study

Sandy's Monsoon bird study

Tom and Vijay's observations on habitat preferences of April-May 2003