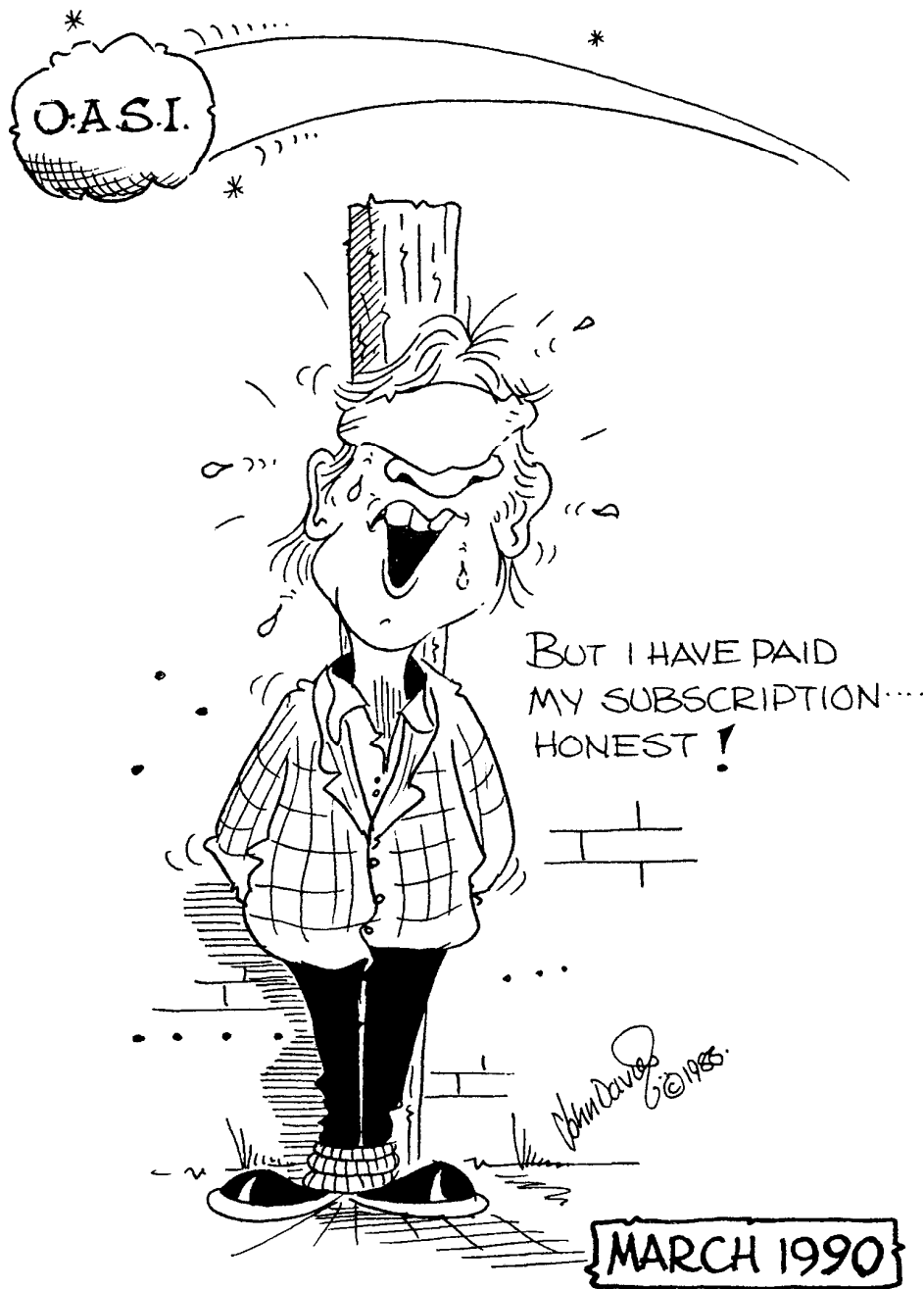


ORWELL ASTRONOMICAL SOCIETY IPSWICH



NIGHT SKY

All times GMT

SUN

Rises approximately between 06.50 - 05.40
Sets approximately between 17.30 - 18.30

MOON



4th



11th



19th



26th

MERCURY Mercury remains in the morning sky until the 20th when it is at superior conjunction. It then moves quickly into the evening sky setting an hour and a half after the sun by the end of the month.

VENUS Venus is visible in the morning sky before sunrise. It reaches greatest elongation on 30th (46°). Mag. -4.4

MARS Mars will be rising less than two hours before the sun during the month. the eastward motion of the planet keeps it in the morning twilight sky. Mag. 1.0

JUPITER Jupiter remains well placed for observation in the evening sky all month. It will be setting by 02.00 at the end of the month. Mag. -2.1

SATURN Saturn will be rising at about 03.00 by the end of the month. Mag. 0.6

URANUS Rises about $\frac{1}{2}$ hour before Saturn.

NEPTUNE Rise at about the same time as Saturn

R. Gooding

SOCIETY NEWS

1 1990 SUBSCRIPTIONS

The 1990 membership subscriptions are now due.

The rates are :-

Junior & OAP's	£4.50 +	£2.00	for newsletter postage
Adult	£7.00 +	"	" " " "
Family	£8.00 +	"	" " " "

Please send all monies as soon as possible to :-

Mr.D.Barnard

Ipswich
IP4 5PP

This will be the last newsletter sent if you have not yet paid.

2 COMMITTEE MEETING

The next committee meeting will be held at the observatory on Saturday 24th March, starting at 7.30. As usual this meeting is open for any member to attend if they wish.

3 1990 LECTURE PROGRAMME

All meetings will be held at the Friends Meeting House, 39 Fonnereau Road Ipswich.

a) Unidentified Flying Objects.

By Del Newman with Brenda Butler. Friday 16th March at 8.00

b) The programme for this meeting has not yet been finalised. It is proposed to include 1 or 2 short lectures given by members followed by a video on either Mars or the Voyagers missions.

Friday 20th April at 8.00pm

4 RAYLEIGH ASTRONOMICAL CONVENTION

The Rayleigh Astronomical Society will be holding their 21st anniversary convention on Sunday 6th May. I will include a full programme next month. If you would like to attend please contact Roy Gooding.

THE FEBRUARY LECTURE MEETING

This was the first lecture meeting to be held for some time. Our speaker was Neil Taylor, one of our members, who has been running evening classes on astronomy at Felixstowe for several years. If there are any members who did not know about this and would like to attend please contact Neil. I expect that you would have to start at the beginning of a school term.

Neil's topic for his talk was Asteroids. He had previously given this same lecture at our 21st anniversary convention back in 1988. Only one or two members had attended his first presentation, every one else was occupied looking after the rest of the days events.

The meeting was quite well attended with about 20 members, (at some past meetings there have been less than 10).

Neil started with an overall view of the solar system, the discovery of the the three outer planets, the Titius-Bode empirical law of planetary distance finishing with the discovery of the asteroids. The evening was concluded with a discussion and questions.

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1
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*
*                               UNIDENTIFIED FLYING OBJECTS
*
*                               BY
*
*                               DEL          NEWMAN
*
*                               8.00pm     FRIDAY   16th  MARCH
*
*
*                               AT THE FRIENDS MEETING HOUSE
*
*
*                               39 FONNEREAU ROAD
*
*****

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Messier Objects Through The Year

David Payne

Now that most of the renovation work has been completed at the observatory it was suggested at the AGM in January, that more observational work should now be undertaken with the 10 inch Refractor. One possible observational project that could be attempted over the following twelve months would be to observe all the Messier objects. This will not be an easy task. Many of the summer Messier objects in Sagittarius are very low down in the southern sky and because of the very high level of light pollution from Felixstowe Docks they will be very difficult from Orwell Park, even with the 10" Refractor.

I have listed below the Messier Catalogue in a rather unusual order. Each month of the year is allocated a list of objects that are in the southern sky and are near to or cross the central meridian during the said month. The list for each month is further arranged to be in a mainly ascending order of declination. This means that the lowest objects in the sky and hence, in the UK, the most difficult to observe, are listed first for each month. April is a particularly busy month with all the objects in Virgo. June and July contain some of the most beautiful yet more difficult objects because of low declinations.

The data for the objects is listed left to right as follows: The first number is the Messier Catalogue number. All objects are listed including the modern additions to M110. the next column is the NGC number for the object followed by the constellation in rather cryptic short hand. The type column contains a two letter code as follows:

- GC - Galactic Cluster
- DN - Diffuse Nebula
- OC - Open Cluster
- PN - Planetary Nebula
- GC - Globular Cluster
- EG - Elliptical Galaxy
- SG - Spiral Galaxy
- IG - Irregular Galaxy

Following 'Type' is the RA in Hours and decimal minutes, Declination in degrees and minutes, integrated visual magnitude, the size in arc minutes and the distance in light years. Note that the distance to Galaxies are in millions of light year and distances to Globular clusters in thousands of light years. The last column occasionally contains notes, that may get added to in a later version of this article if I ever write it!

January

Messier No.	NGC No.	Con	Type	RA hrmin	Dec Dgmin	Mag	Size mins	Dist lt yr	Notes
79	1904	Lep	GC	0522.2	-2434	8.4	3.2	54k	
42	1976	Ori	DN	0532.9	-0525	4.0	66x60	1	Great Orion Neb.
43	1982	Ori	DN	0533.1	-0518	9.1	20x15	1	part of Orion Neb.
78	2068	Ori	DN	0544.2	0002	10.3	8x6	1600	emission nebula
1	1952	Tau	PN	0531.5	2159	8.2	6x4	6	Crab Nebula
36	1960	Aur	OC	0532.0	3407	6.3	12	4100	
37	2099	Aur	OC	0549.0	3233	6.2	20	4600	
38	1912	Aur	OC	0525.3	3548	7.4	20	4200	

February

Messier No.	NGC No.	Con	Type	RA hrmin	Dec Dgmin	Mag	Size mins	Dist lt yr	Notes
93	2447	Pup	OC	0742.4	-2345	6.0	2536	36	
41	2287	CMa	OC	0644.9	-2042	4.6	32	2400	
46	2437	Pup	OC	0739.6	-1442	6.0	24	5400	
47	2422	Pup	OC	0734.3	-1422	4.5		1600	
50	2323	Mon	OC	0700.5	-0816	6.3	10.0x5.5	3	
35	2168	Gem	OC	0605.7	2420	5.3	40	2800	

March

Messier No.	NGC No.	Con	Type	RA hrmin	Dec Dgmin	Mag	Size mins	Dist lt yr	Notes
48	2548	Hya	OC	0811.2	-0538	5.3		1500	
67	2682	Cnc	OC	0848.3	1200	6.1	2.9	2250	Alternate dec: 0847.8
105	3379	Leo	EG	1045.2	1251	9.2	2.2x2.0	25m	
95	3351	Leo	SG	1041.3	1158	10.4	6.1x3.9	25m	barred spiral galaxy
96	3368	Leo	SG	1044.2	1205	9.1	5x4	25m	Sa
65	3623	Leo	SG	1116.3	1323	9.3	8.0x2.5	35m	Sa
66	3627	Leo	SG	1117.6	1317	8.2	15	35m	Sb
44	2632	Cnc	OC	0837.5	1952	3.7	95	500	Praesepe
81	3031	UMa	SG	0951.5	6918	7.9	21x9.8	7m	Sb
82	3034	UMa	IG	0951.9	6956	8.8	9x4	7m	

April

Messier No.	NGC No.	Con	Type	RA hrmin	Dec Dgmin	Mag	Size mins	Dist lt yr	Notes
68	4590	Hya	GC	1236.8	-2629	8.0	2.8	40k	
104	4594	Vir	SG	1237.3	-1121	8.7	6.0x2.5	50m	Sombrero Galaxy
61	4303	Vir	SG	1219.4	0445	10.1	4.3	70m	Sc-barred spiral galaxy
49	4472	Vir	EG	1227.3	0816	8.6	16	70m	
58	4579	Vir	SG	1235.1	1205	9.2	2.7x1.6	70m	SBb-barred spiral galaxy
59	4621	Vir	EG	1239.5	1155	9.6	2.0x1.8	70m	
60	4649	Vir	EG	1241.1	1149	8.9	5.6x5.3	70m	
89	4552	Vir	EG	1233.1	1250	9.5	1.3x1.3	70m	
86	4406	Vir	EG	1223.7	1313	9.7	2.1x1.4	70m	giant elliptical galaxy
87	4486	Vir	EG	1228.3	1240	9.2	1.9x1.2	70m	giant elliptical galaxy
84	4374	Vir	EG	1222.6	1310	9.3	1.0x1.4	70m	
90	4569	Vir	SG	1234.3	1326	10.0	7.5x2.2	70m	Sb
99	4254	Com	SG	1216.3	1442	10.1	4.6x3.9	70m	Sc
91	4548	Com	SG	1232.9	1446	9.5	3.7x3.2	40m	barred spiral galaxy
98	4192	Com	SG	1211.3	1511	11.7	8.4x1.9	70m	Sb
100	4321	Com	SG	1220.4	1606	10.6	5.3x4.5	70m	Sc
85	4382	Com	EG	1222.8	1828	9.3	1.0x1.7	70m	S0
64	4826	Com	SG	1254.3	2157	8.8	7.8x1.5	12m	Sb
94	4736	CVn	SG	1248.6	4123	7.9	5.0x3.5	14m	Sb
106	4258	CVn	SG	1216.5	4735	8.6	19.5x7.0	25m	Sb
108	3556	UMa	SG	1108.7	5557	10.7	7.7x1.3	25m	Sb
109	3992	UMa	SG	1155.0	5339	10.8	6.2x3.5	25m	barred spiral galaxy
97	3587	UMa	PN	1112.0	5518	12.0	3.4x3.0	2600	Owl Nebula

May

Messier No.	NGC No.	Con	Type	RA hrmin	Dec Dgmin	Mag	Size mins	Dist lt yr	Notes
83	5236	Hya	SG	1334.3	-2937	10.1	10x8	8m	Sc
5	5904	Ser	GC	1516.0	0216	6.2	12.7	30k	
88	4501	Com	SG	1229.5	1442	10.2	5.5x2.4	40m	Sb
53	5024	Com	GC	1310.5	1826	7.6	2.1	60k	
3	5272	CVn	GC	1339.9	2838	6.3	9.8	30k	
63	5055	CVn	SG	1313.5	4217	9.5	6.5x3.2	14.5m	Sb
51	5194	CVn	SG	1327.8	4727	8.1	12	15m	Whirlpool Galaxy
101	5457	UMa	SG	1401.4	5435	9.6	22x22	15m	Sc-same as M102
102	5457	UMa	SG	1401.4	5435	9.6	22x22	15m	Sc-same as M101

June

Messier No.	NGC No.	Con	Type	RA hrmin	Dec Dgmin	Mag	Size mins	Dist lt yr	Notes
7	6475	Sco	GC	1750.7	-3448	4.1	60	1	
6	6405	Sco	GC	1736.8	-3211	5.3	25	2	
62	6266	Oph	GC	1658.1	-3003	6.6	10x5	26k	
4	6121	Sco	GC	1620.6	-2624	6.4	14	10k	
19	6273	Oph	GC	1659.5	-2611	6.6	4.3	20k	
8	6523	Sgr	DN	1801.6	-2420	6.0	60x35	6.5	Lagoon Nebula
20	6514	Sgr	DN	1758.9	-2302	9.0	29x27	2.2	Trifid Nebula
80	6093	Sco	GC	1614.1	-2252	7.7	3.3	36k	
21	6531	Sgr	GC	1801.8	-2230	6.5	10	3	
23	6494	Sgr	GC	1754.0	-1901	6.9	25	4.5	
9	6333	Oph	GC	1716.2	-1828	7.3	2.4	25k	
107	6171	Oph	GC	1629.7	-1257	9.2	2.2	10k	
10	6254	Oph	GC	1654.5	-0402	6.7	8.2	16k	
14	6402	Oph	GC	1735.0	-0313	7.7	3	23k	
12	6218	Oph	GC	1644.6	-0152	6.6	9.3	16k	
13	6205	Her	GC	1639.9	3633	5.7	10	25k	

July

Messier No.	NGC No.	Con	Type	RA hrmin	Dec Dgmin	Mag	Size mins	Dist lt yr	Notes
69	6637	Sgr	GC	1828.1	-3223	8.9	2.5	25k	
70	6681	Sgr	GC	1840.0	-3221	9.6	6	65k	
55	6809	Sgr	GC	1936.9	-3103	5.0	1.8	20k	
54	6715	Sgr	GC	1852.0	-3032	8.0	15	50k	
28	6626	Sgr	GC	1821.5	-2454	7.3	15	15k	
22	6656	Sgr	GC	1833.3	-2358	5.9	17.3	10k	
25	4725	Sgr	GC	1828.8	-1917	6.5	40	2	open cloud
24	6603	Sgr	GC	1815.5	-1827	4.6	4	10	star cloud
18	6613	Sgr	GC	1817.0	-1709	7.5	12	6	
17	6618	Sgr	DN	1818.0	-1612	7.5	46x37	5	Omega Nebula & cluster
16	6611	Ser	GC	1816.0	-1348	6.4	25	7	nebula & cluster
26	6694	Sct	GC	1842.5	-0927	9.3	9	5	
11	6705	Sct	GC	1848.4	-0620	6.3	10	6	
56	6779	Lyr	GC	1914.6	3005	8.2	1.2x1.0	40k	
57	6720	Lyr	PN	1851.7	3258	9.3	4.4x3.5	4100	Ring Nebula

August

Messier No.	NGC No.	Con	Type	RA hrmin	Dec Dgmin	Mag	Size mins	Dist lt yr	Notes
75	6864	Sgr	GC	2003.2	-2204	8.0	1.9	100k	
72	6981	Aqr	GC	2050.7	-1244	9.8		60k	
73	6994	Aqr	OC	2056.4	-1250	9.0			cluster of 4 stars
71	6838	Sag	GC	1951.4	1839	9.0		8.5k	
27	6053	Vul	PN	1957.4	2235	7.6	8x4	1250	Duabbell Nebula
29	6913	Cyg	OC	2022.2	3821	7.1	12	7.2	

September

Messier No.	NGC No.	Con	Type	RA hrmin	Dec Dgmin	Mag	Size mins	Dist lt yr	Notes
30	7099	Cap	GC	2137.5	-2325	8.4	5.7	40k	
2	7009	Aqr	GC	2130.9	-0103	6.3	8.2	50k	
15	7078	Peg	GC	2127.6	1157	6.0	7.4	40k	
39	7092	Cyg	OC	2130.4	4813	5.2	30	900	

October

Messier No.	NGC No.	Con	Type	RA hrmin	Dec Dgmin	Mag	Size mins	Dist lt yr	Notes
52	7654	Cas	OC	2322.0	6120	7.3	7.6	7	

November

Messier No.	NGC No.	Con	Type	RA hrmin	Dec Dgmin	Mag	Size mins	Dist lt yr	Notes
74	628	Psc	SG	0134.0	1532	10.2	10.6x6.0	20m	Sc
33	598	Tri	SG	0131.1	3024	6.7	65x35	2.3m	Sc
31	224	And	SG	0040.0	4100	4.8	160x40	2.2m	Andromeda Galaxy
32	221	And	EG	0040.0	4036	8.7	3.4x2.8	2.2m	satellite of M31
110	205	And	EG	0037.6	4125	9.4	8.0x3.0	2.2m	satellite of M31
76	650	Per	PN	0138.8	5119	10.2	1.0x0.5	3400	
103	581	Cas	OC	0129.9	6027	7.4	5	8	

December

Messier No.	NGC No.	Con	Type	RA hrmin	Dec Dgmin	Mag	Size mins	Dist lt yr	Notes
77	1068	Cet	SG	0240.1	-0014	8.9	6.5	30m	Sb-Seyfert galaxy
45		Tau	OC	0343.9	2358	1.6	100	400	The Pleiades
34	1039	Per	OC	0238.8	4234	5.5	18	1400	

CHOOSING A TELESCOPE

Over the last two or three monthes this item has been used to fill in, when not enough articles have been submitted to fill the journal.

All though it was written orionally about three years ago prices have not changed a lot and as far as i know most of the addresses are still correct.

E. SIMS

GOLDEN AGE CO Furrows End, Stainton, Kendal, Cumbria, LA8 ODU. Sundials.

HIGHGATE OPTICAL MANUFACTURING CO 38 Jamestown Road, London, NW1 7EJ. Tel: 01-267 4936. Terrestrial and astronomical telescopes.

DAVID HINDS LTD 2 Wolsey Road, Hemel Hempstead, Herts, HP2 4TU. Optics.

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RHEINBERG SCIENCES LTD Sovereign Way, Tonbridge, Kent, TN9 1RN. Tel: 0732 357779. Telescopes, optics, slides, tools, lasers etc.

SPEEDIBREWS 54 Lovelace Drive, Pyrford, Woking, Surrey. Tel: Byfleet 46942. Photographic film for astronomical purposes.

ASTRO SYSTEMS LTD 24 Old Bedford Road, Luton, Beds. LU2 7NX. Tel: Luton 421136. Telescopes, eyepieces, optics, finders and accessories.

ASTROTECH 39 Periwinkle Lane, Dunstable, Beds. Electronic equipment for the amateur astronomer - variable frequency drive units, sidereal clocks, frequency interval timers etc.

AUDIO LEARNING LTD 84 Queensway, London, W2. Tel: 01 727 2748. Slide/cassette sets "Black and White Stars", "Probing the Radio Universe" etc.

AUSTIN ROBERTS Tarran Way South, Tarran Industrial Estate, Moreton, Wirral, Merseyside, L46 4TW. Observatory domes.

* TELETEXT INFORMATION FOR ASTRONOMY *

If you have a TV with teletext and assumed that nothing of any real [Astronomical !] interest was contained therein, think again. On Oracle page 568 [Channel 4], on Saturdays and Sundays, a feature called 'In Orbit' can be found provided up to date space news. Around the time of 'Sky at Night' screenings, the 'TV Plus' feature on the BBC Ceefax service page 610 includes 'Sky at Night' Pages. If anyone uses or has access to the telephone teletext service, Prestel, that to has had (and possibly still does have) some astronomy pages ; a scan of the index will be needed to verify this.

OASI EUROPEAN EXPEDITION

A trip to one of the Astronomy centres either the Algarve (Portugal) or the French Pyrenees is being considered. The Astronomy Centres provide B&B or half-board accommodation at a site with Observatory facilities. The duration of the visit would be around eight to fourteen days. Anyone interested should either come to the observatory on a Wednesday Evening or contact Gary Marriot (Ipswich) or Peter Richards (Ipswich).

WINCHESTER WEEKEND 1990

The British Astronomical Association is holding its 23rd Winchester Weekend from the 30th March to the 1st of April this year. The event is an opportunity to meet amateur astronomers from around Britain and listen to first rate lectures from prominent amateur and professional astronomers. Patrick Moore, Heather Couper and many other well known figures frequently give lectures. The orientation is towards practical astronomy with observation (weather permitting) and practical sessions.

With 1990 being the BAA Centennial year some special events can also be expected. The fee, including full board accommodation, is £45 for BAA members and £51 for non-members. As an affiliated society the OASI has one place at the lower rate which I have booked and I will share the discount with any other OASI members who are not BAA members. Bookings should be made soon so contact the BAA if you want to go.

PROGRAMME FOR MARCH

Mondays from 8pm	GENERAL OBSERVATION SECTION		
5-12	Mr R Newman	[redacted] Felixstowe, IP11 9DY.	Tel. Fel. [redacted]
19-26	Mr J King	[redacted], Felixstowe, IP11 9LQ.	Tel. Fel. [redacted]
Tuesdays from 8pm	GENERAL OBSERVATION SECTION		
6-13	Mr R Newman	[redacted] Felixstowe, IP11 9DY	Tel. Fel. [redacted]
20-27	Mr J King	[redacted], Felixstowe, IP11 9LQ	Tel. Fel. [redacted]
Wednesdays from 8pm	NEBULA AND FAINT OBJECTS SECTION		
7-14	Mr M Cook	[redacted], Ipswich, IP4 5PZ	Tel. [redacted]
21-28	Mr D Payne	[redacted], Wickham Market, IP13 OSD	Tel. W [redacted]
Fridays from 8pm	GENERAL OBSERVATION SECTION		
7-9	Mr P R Richards	[redacted], Ipswich, IP4 1QB.	Tel. [redacted]
16-23	Mr M Harlow	[redacted], Trimley IP10 0XB.	Tel. [redacted]
30	Mr R A Lobbett	[redacted], Felixstowe, IP11 8UJ	Tel. F [redacted]

All nights are open to all members, but, on nights other than Wednesday ring directors to confirm dates. [Directors will also be able to inform you of whether a group visit is taking place that evening.] All numbers Ipswich (0473) unless otherwise indicated.

COMMITTEE 1990

CHAIRMAN	D Payne	(Address above)	Home: [redacted]
VICE CHAIRMAN	D Barnard	[redacted], Ipswich, IP4 5PP	Work: [redacted] Home: [redacted] Work: [redacted]
SECRETARY	R Gooding	[redacted], Ipswich, IP1 6AE.	Home: [redacted] Work: [redacted]
TREASURER	M Nicholls	[redacted], Capel St Mary, Ipswich, IP9 2EX.	Home: [redacted] Work: [redacted]
MAINTENANCE	M Cook	(Address above)	Home: [redacted] Work: [redacted]
JOURNAL CO-ORD	E Sims	[redacted], Ipswich IP1 4HA	Home: [redacted]
LIBRARIAN	P Richards	(Address above)	Home: [redacted] Work: [redacted]
EQUIPMENT CURATOR	J King	(Address above)	Home: [redacted]
SPECIAL EVENTS CO-ORD	A Smith	[redacted], Ipswich IP2 9ES	Home: [redacted]