# SUMMARY FOR DECEMBER, 1977

December was wet, a bit on the mild side and under average on the snow side. The temperature averaged  $34.2^{\circ}$ ,  $1.2^{\circ}$  above normal and  $5.2^{\circ}$  warmer than December, 1976. Temperatures fluctuated often with 7 days averaging 10° or mor above normal and 5 days averaging as much below normal. The warmest day was the 21st, when the mercury hit 55°, 17° above normal, and the coldest temperature was 5° on the 12th, 22° below normal.

Precipitation totaled 6.20 inches, 1.96 over normal. The most in any day was 1.35 inches on the 1st. Measureable amounts fell on 16 days. Snow totaled only 5.2 inches, 3.0 less than average. The most in 24 hours was but 1.8 inches on the 5-6th. Some western and northern suburbs had much heavier snow fall. Wind everaged 14.2 mph; the fastest mile averaged was 49 mph from the northeast on the 6th, the peak gust registered 50 mph from the northwest on the 10th.

The 78th Christmas Bird Count (CBC) was held between December 17, 1977, through January 2, 1978. This summary contains a great deal of records submitted by the compilers of various counts. In order to avoid the repeating of dates, the following chart should be used for determining the date of the record.

CBC	DATE	COMPILER
Athol	12-26	Robert Coyle
Buzzards Bay	12-17	Richard Harlow
Cape Ann	12-18	Sally Ingalls
Cape Cod	12-18	Wallace Bailey
Greater Boston	12-18	Robert Stymeist
Martha's Vineyard	12-17	Gus Ben David
Millis	12-17	John Marshall, Jr.
Nantucket	12-18	Edith Andrews
Newburyport	12-26	Richard Heil
Plymouth	12-28	Trevor Lloyd-Evans
Quincy	12-17	Sibley Higginbotham
Tuckernuck	12-17	Richard Veit
Worcester	12-17	Francis McMenemy

#### LOONS THROUGH HERONS

On Nantucket 244 Common Loons and 50 Red-throated Loons were noted on the 18th (CBC), 44 Common Loons on the 26th (Newburyport CBC), and 59 were seen on the Plymouth CBC on the 28th. Red-necked Grebes were noted in small numbers with 3 on the Quincy CBC, 2 on the Nantucket CBC, and 4 on the Plymouth CBC (TL, LE). A total of 227 Horned Grebes were noted during the month. The Cape Cod CBC recorded 37 Pied-billed Grebes; the northern-most report of Pied-billed Grebes was 2 birds on the 5th in Salisbury (DCA). An unidentified shearwater was observed off 1st Encounter on the 7th (CAG, BN). On the 18th, the Nantucket CBC recorded 780 Gannets; the Cape Cod CBC on the same day recorded 120. Great Cormorants totaled 436 on the Quincy CBC, 161 on the Greater Boston CBC, and 140 on the Cape Cod CBC. Double-crested Cormorants were noted from Revere on the 2nd, when 3 were reported (SZ), an immature from PI on the 3rd (WRP, RPE), 3 from the Cape Cod CBC, and 2 (1 adult and 1 imm.) on

the Plymouth CBC.

Thirty-six Great Blue Herons were noted during the month, as were 44 Black-crowned Night Herons. A Snowy Egret was found on the 17th on Martha's Vineyard (CBC). American Bitterns were found on the Tuckernuck (3), Cape Cod, Newburyport (2) and Plymouth counts.

# WATERFOWL

Six Whistling Swans were reported from Martha's Vineyard on the 17th (CBC), 30 Mute Swans were noted in Lakeville on the 23rd (PH). Canada Geese totaled 2386 on the Cape Cod Count, and 1829 on the Newburyport CBC. Brants were noted in good numbers with 933 (Quincy), 98 (Boston), 1413 (Cape Cod), 126 (Plymouth), 10 (Newburyport). A single Snow Goose was noted from Braintree on the 1st (BAL, MFL), 2 were seen on the Martha's Vineyard and the Newburyport CBC. Black Duck CBC totals were as follows: Quincy-1009, Boston-1444, Cape Cod-1413, Newburyport-9326, and Plymouth-1064. Eighty-five Gadwalls were noted in Ipswich on the 3rd (WRP, RPE), and 14 were noted from GMNWR on the 2nd (RKW). There There were still 60- Pintails on PI on the 1st (P. Miliotis), and 95 were noted from Yarmouth, and 20 were seen in Barnstable on the 27th (BN, VL). The last Pintail was seen at GMNWR on the 9th (RKW). Greenwinged Teal totaled 102 on the 1st at PI (P. Miliotis) and 150 were noted on the Nantucket CBC. Single Blue-winged Teal reports came from GMNWR on the 15th and 16th (RKW) and from the 27th to 31st in Sandwich (RFP). Five European Wigeons were noted on the Nantucket CBC, where 434 American Wigeons were counted; other American Wigeon CBC totals were 52 in Greater Boston, 37 in Plymouth. As many as 9 Northern Shovelers were reported from GMNWR on the 2nd (RKW), 8 were noted from PI on the 4th (P. Miliotis), and a record from Boylston on the 28th was interesting (HLM). Over 28 Wood Ducks were noted during the month from 8 localities, including 11 from Westport on the 1st (WRP#).

Redheads totaled 90 on the Buzzard's Bay CBC, and 143 were noted on the Nantucket CBC; 13 other individuals were reported. Ring-necked Duck totals were very low with only 4 noted on the Nantucket CBC, 42 on the Cape Cod CBC, and 17 on the Plymouth CBC. Canvasbacks retreated to Bristol County and the islands when ice began forming on all the ponds; 100 were noted from Acoaxet and 1200 from Assonet on the 11th (SSBC-WRP); 500 were noted on the Nantucket CBC. Greater Scaup CBC totals: 3290 in Quincy, 3608 in Greater Boston and 1118 on Nantucket. Lesser Scaups were noted on the Nantucket CBC with 35, and 3 on the Plymouth CBC. Other reports included 10 in Lakeville on the 3rd (RRV#) and a single bird in Framingham on the 25th (RAF). CBC totals for Common Goldeneyes were Quincy-859, Boston-627, Nantucket-1151, Cape Cod-756, Newburyport-1028, and Athol recorded 4, which was new to their count. Eleven Barrow's Goldeneyes were noted as follows: singles from Assonet on the 11th (WRP), N. Scituate on the 16th (P. Anderson), Tuckernuck (CBC), Orleans (CBC), Plymouth on the 27th-28th (WRP#); 2 birds were reported from the following locations: Cape Ann (CBC), Boston (CBC), and in Scituate Harbor from the 17th-26th (SH#). Totals of Buffleheads include Quincy-616, Boston-695, and Cape Cod-1102. The stronghold for Oldsquaws is certainly off Nantucket; on the 17th Tuckernuck recorded 26,500, and the Nantucket CBC count numbered 14,521 on the 18th. Five Harlequin Ducks continued throughout the month in East Orleans (v.o.)

and as many as 5 were seen off and on in Magnolia (v.o.); singles were noted off Cohasset on the 16th-17th (SH) and one was seen in Scituate on the 4th (WRP#). Common Eider CBC totals were: Quincy-4395, Boston-4020, Tuckernuck-5015, Nantucket-11,704, Cape Cod-1492, and Plymouth-6880. Two King Eiders remained throughout the month in E. Orleans (v.o.), singles were noted in Quincy (CBC-SH), and in Rockport on the 21st (JG, LC). Two were noted in Mashpee on the 23rd (PH) and 2 were seen in Ellisville on the 28th (TLL'E). At Tuckernuck 1398 White-winged Scoters, and 975 Black Scoters were noted on the CBC, and Nantucket's CBC recorded 1901 Black Scoters. Seventy Ruddy Ducks were seen on the Cambridge Reservoir in Lincoln on the 4th (RAF), but my nonth's end very few were reported due to the freezing ponds. The Cambridge Reservoir also harbored 54 Hooded and 195 Common Mergansers on the 4th (RAF). The Cape Cod CBC reported 201 Common Mergansers and the Plymouth CBC noted 217. Red-breasted Merganser CBC totals were: Quincy-659, Boston-297, Cape Cod-265, Nantucket-795, Newburyport-136, and Plymouth-556.

#### RAPTORS

A very late Turkey Vulture was observed flying over Nahant on the 2nd (SZ); the previous late date was 11/17/58 in Truro, and there is one winter record from Chatham, 1/17/63. Nine Goshawks were noted. Twentyeight Sharp-shinned Hawks were reported and a single Cooper's Hawk was identified in Lancaster on the 31st (HLM). The number of Red-tailed Hawks were especially noteworthy with 32 on the Boston CBC, 23 on the Worcester count and 37 on the Newburyport CBC. Single Red-shouldered Hawks were noted from Millis on the 17th (WED), Wareham (CBC-WRP#), Brookline (CBC-AA) and in Orleans (CBC). Rough-legged Hawks were reported in exceptional numbers with 54 individuals noted throughout eastern Massachusetts. An immature Bald Eagle continued in Orleans through the 18th (RMB#, v.o.). Total CBC counts of Marsh Hawks were: Tuckernuck-6, Nantucket-28, Cape Cod-15, Newburyport-7. There were 9 additional birds reported from 7 locations. An Osprey was found on the Martha's Vineyard CBC. However, it died a short time later. A single Peregrine Falcon was reported over Dorchester on the 23rd (JDO'R). Single Merlins were noted from Eastham on the 4th (RMB#), from Scituate also on the 4th (WRP, SH), from GMNWR on the 15th (RKW, Martha's Vineyard (CBC), Tuckernuck (CBC) and 6 on Cape Cod (CBC). Totals of American Kestrels on CBC were: Boston-25, Cape Cod-31, Newburyport-22, and Plymouth-14.

#### GROUSE THROUGH SHOREBIRDS

Nineteen Ruffed Grouses were noted; the closest to Boston was a single bird in the Middlesex Fells (CBC-PMR). Bobwhite CBC totals include 65 in Buzzards Bay, 26 on Cape Cod, 49 in Plymouth, and 12 in Medfield.

A <u>Clapper Rail</u> was flushed from the marsh around East Boston on the 10th (RRV, SAP), and 2 were noted from WBWS, (CBC-WWB). Thirty-two Virginia Rails were noted, and a <u>Sora</u> was noted from GMNWR on the 22nd and 30th (RKW). A <u>Common Gallinule</u> was seen off and on at Horn Pond, Woburn, (fide GWG) and 2 were noted on the Nantucket CBC.

Forty-eight Killdeers were noted from 8 coastal locations during the month, and 1 was found in Northbridge on the llth (NEM). Black-bellied

Plovers totaled 14 from the Quincy count, 55 on the Cape Cod CBC and 4 were noted on the Newburyport CBC. Twelve Ruddy Turnstones were found on the Nantucket CBC and 1 was noted on the Boston and Plymouth CBC's. An American Woodcock was found in Saugus on the 16th (AS), and 27 Common Snipes were reported throughout the month from 8 localities. A Willet (of the western race) was carefully noted on the 18th in Eastham (CBC-WRP, KSA#). The only recent December record is in 1974 where a Willet was present on Nauset from the 1st-7th. Two Greater Yellowlegs were found in E. Boston on the 10th (RRV#), and 1 was noted on the Quincy CBC and 2 on the Cape Cod CBC. Red Knots were present throughout the month in Scituate, with a high count of 20 on the 4th (SH, WRP); the Quincy count recorded 25, while the Plymouth CBC noted 32. High counts of Purple Sandpipers include 85 on the Boston CBC, 35 on the Nantucket CBC and 62 were found in Rockport on the 3rd (BBC, VA). Over 800 Dunlins were estimated from Scituate on the 4th (WRP, SH), while the counts in Quincy recorded 608, Boston-241 and Cape Cod noted 2672. Long-billed Dowitchers were reported from Newburyport on the 3rd when 3 were seen (RPE, WRP); a single bird was found on the 10th (PA) and 5 were carefully identified on the CBC there on the 26th (WRP#). Another adult Longbilled Dowitcher was found in Scituate on the 4th (WRP, SH). An unidentified dowitcher was observed on the 4th at Nauset (CAG, BN). calidris (sp.?) sandpiper was noted from Newburyport on the 3rd (WRP, RPE). A Marbled Godwit was found in E. Boston on the 2nd (SZ); single Marbled Godwits were reported in December of 1973, 1974, and 1975 but all from Cape Cod. Sanderlings totaled 135 on the Nantucket CBC, 435 on the Boston CBC and 248 on the Plymouth CBC.

#### SKUAS THROUGH ALCIDS

A skua (sp.?) was noted off 1st Encounter on the 7th (BN, CAG). The only other skua reports in recent Decembers include 1 in Rockport in 1973 and 2 from Nantucket Shoals in 1976. Inland reports of Glaucous Gulls include 1 in Clinton on the 18th (HLM) and 2 were reported on the Worcester CBC on the 17th. Thirty Iceland Gulls were counted along Cape Ann on the 19th (CWL) and 23 were reported on the Newburyport CBC. Ring-billed Gull CBC totals include: 868 in Quincy, 302 in Boston, 290 on Cape Cod, and 136 in Newburyport. Black-headed Gulls continue in good numbers in the Boston Harbor area with 9 in E. Boston on the 10th (SAP, RRV), and 8 were found on the Quincy CBC; two adults were noted from Newburyport on the 3rd (WRP, RPE) and singles were found in Orleans, Nauset and E. Falmouth (CBC's). At Manomet over 1000 Bonaparte's Gulls were noted on the 8th (MBO) with a near 700 on the Tuckernuck CBC and over 500 on the Newburyport CBC. Wintering Laughing Gulls numbered 21 in the Revere-Winthrop area (BBC-RHS) early in the month with only 1-2 there by month's end; another single Laughing Gull was noted on the Plymouth CBC. In the Newburyport-Salisbury area 1-2 Little Gulls were present off and on during the month. The CBC totals for Black-legged Kittiwakes were: 820-Tuckernuck, 1201-Nantucket, and 1500-Cape Cod. A Forster's Tern was found in Newburyport on the 4th (WRP, RPE); other late occurrences were 12/4/68 when 2 were observed in Wellfleet, and more recently at Newburyport on 12/3/72 (RAF#). More startling was the record of a Common Term on the 18th at Nantucket (CBC-John Dennis#). Only occasional stragglers remain into November with no records for December, and only one record for January (1/3/54).

At Cape Ann 125 alcids were moving along Andrews Point on the 19th, most

of which were thought to be Razorbills (CWL). As many as 4 Black Guillemots were found at Rockport during the month (v.o.), while 3 were noted from Ipswich on the 26th (CBC). A single Black Guillemot was found in Sandwich on the 21st (RFP).

# OWLS THROUGH SWALLOWS

The Greater Boston CBC recorded 7 species of owls, with an additional species during count period. Highlights were 2 Barn Owls found in a chimney on Thompson's Island, 17 Screech, 5 Great Horned, 4 Barred, 2 Short-eared, and single Long-eared and Saw-whet Owls. A Snowy Owl was observed over Route 2 in Lexington on the 17th (JD'R), and another was seen in Byfield on the 25th (TJ). Barn Owls were also noted on the Martha's Vineyard and Cape Cod CBC and one was picked up dead in Rockport on the 17th (ON). The Newburyport CBC reported 13 Screech, 8 Great Horned Owls, and a Saw-whet Owl. Two Long-eared Owls were present off and on throughout the month (JMA), and 3 were noted on the Cape Cod CBC.

Eighteen Belted Kingfishers were reported from the Cape Cod CBC, while 8 on the Quincy CBC was the next highest maximum. The milder winter season on Cape Cod accounts for 115 Common Flickers on the Cape Cod CBC versus 15 on the Boston CBC. Red-headed Woodpeckers were reported from Gloucester most of the month (VA#+v.o.), from Weston on the 5th (LJR) and in Dover on the 12th-13th (Mrs. Kenneth King). Wintering Yellow-bellied Sapsuckers were reported from Chatham on the 11th (fide BN), at the Arnold Arboretum on the Boston CBC (HHD'E#) and on Nantucket on the 26th (CJ). Thirty Hairy Woodpeckers were recorded on the Boston CBC, while only 6 were noted on the Cape Cod CBC. A total of 148 Downy Woodpeckers were counted on the Boston CBC.

An empidonax flycatcher was found in Salem on the 3rd (RSH), establishing the latest record for an empidonax flycatcher in Massachusetts. Horned Larks totaled 228 on the Newburyport CBC, for a new high for that CBC. Four Tree Swallows were noted from south Plymouth on the 23rd (MBO staff).

### BLUE JAYS THROUGH MIMIDS

The CBC totals for Blue Jays include 411 in Quincy, 1091 in Boston, 719 in Newburyport, 422 in Athol and 546 in Plymouth. The all-time high count for Blue Jays is 2,837 from Concord. A Common Crow roost in Waltham (LJR) contained an estimated 2,000 birds, while other roosts were noted from West Roxbury (RMB) and Natick (EWT); only a few Fish Crows were reported with 6 on the Boston CBC and 3-5 were noted from Weston (LJR). Black-capped Chickadee CBC totals were up from 1976; most notable was Newburyport with 770 reported as compared with only 199 last year. Other CBC totals included 811 in Boston, 672 in Athol, and 907 on Cape Cod. A Boreal Chickadee was noted in West Boylston on the 17th (BB) and another was present in Lexington from the 24th to the 26th (JWA). Tufted Titmice CBC totals include 122 in Quincy and 155 in Boston. White-breasted Nuthatch CBC totals were 106, Worcester; 171, Boston; 72 Newburyport, and 51 in Athol. The Red-breasted Nuthatch invasion of this past fall was still much in evidence with the CBC totals. The following chart indicates the totals for 1976 and 1977 for Redbreasted Nuthatches.

CBC	1976	1977
Athol	5	8
Boston	23	127
Newburyport	5	20
Quincy	2	12

In Weston, over  $\underline{200}$  Red-breasted Nuthatches were counted on the 26th (LJR)

Twenty Brown Creepers were seen on the Boston CBC, one of which was taken by a Northern Shrike in the Middlesex Fells. In Newburyport 14 Brown Creepers were counted as compared with only 4 in 1976. House Wrens were reported from Orleans and on the 3rd (BN,CAG), in East Falmouth on the 17th (CAG), and singles on the Quincy and Plymouth CBC's for a total of 6 as compared with 0, 3, 0, 2, 1 for the last 5 years. In Melrose 1-2 Winter Wrens were present throughout the month (JWA+v.o.), while 2 were noted on the Plymouth CBC and singles on the Buzzards Bay, Cape Cod and Newburyport CBC's. Sixteen Carolina Wrens were noted on the Buzzards Bay CBC, they seem to be holding a steady population there since 18 were noted on that count last year. A total of 8 Long-billed Marsh Wrens were seen in Harwich on the 18th (CBC-BN) and 2 were seen in the Saugus Marsh on the Boston CBC, for an unusual winter record north of Boston (SZ,CJ).

Mockingbird CBC totals changed very little from 1976, with 59 in Quincy, 101 in Boston, 80 on Cape Cod, 39 in Newburyport and 51 in Plymouth. On Tuckernuck 6 Gray Catbirds were noted, and 5 were counted on the Nantucket CBC; the most northerly report was in Brookline on the 18th (CBC-DA). Eight Brown Thrashers were recorded from seven localities, most south of Boston.

#### THRUSHES THROUGH WARBLERS

American Robin CBC totals include 337 in Boston, 359 on Cape Cod and 52 at Newburyport. Certainly one of the highlights of the month was the mild invasion of Varied Thrush reports with singles reported from Brewster on the 5th (MLE), from Bedford on the 17th (LFoss), from Melrose on the 18th-31st (CBC-JNA+v.o.), from Ipswich on the 26th (HW#) and from West Concord on the 25th (VB#). Five Hermit Thrushes were reported with 1 in Boxford being the most northerly (CBC). In Chatham 7 Eastern Bluebirds were reported (HR#+v.o.) during the month.

Only 18 Golden-crowned Kinglets were reported during the month, the lowest number within the last five years for December. Ruby-crowned Kinglets however totaled 7 individuals, all from Plymouth south, showing no relationship with the scarcity of Golden-crowned Kinglets. Two Water Pipits were noted from Gloucester on the 3rd (BBC-VA) and a single pipit was noted from Revere on the 4th (RHS). Only small flocks of Cedar Waxwings were noted during the month with a maximum of only 75 on the Cape Cod CBC.

Northern Shrikes continued from November with 23+ reported during the month, while an adult Loggerhead Shrike was carefully studied in Canton on the 2nd (RMB). We are sorry to report that the Starling roosts are

still startling in Quincy and Boston with 100,000+ and 87,800+ respectively reported on the CBC.

There were 3 Orange-crowned Warblers reported with singles in Barnstable (RFP) on the 13th, Wareham on the 17th (CBC-WRP#) and in Chatham on the 18th (CBC-VS). Yellow-rumped Warbler CBC totals include 130, Quincy; 265 Tuckernuck; 227, Nantucket; 973, Cape Cod; 131, Plymouth; and 40 on PI. A Pine Warbler was found in Salem on the 3rd (IG), and Palm Warblers totaled 4 on the Cape Cod CBC, and 7 were seen in Bridgeweter on the 27th (RSH). At Great Meadows, Concord, 1-2 Common Yellowthroats were present between the 8th-11th. Four Yellow-breasted Chats were noted during the month with singles in Salem on the 3rd (RSH), Scituate on the 4th (SH#), Falmouth on the 17th (CBC-VL) and 1 was noted in Waltham from the 1st-10th (PM).

# MEADOWLARKS THROUGH SNOW BUNTINGS

As many as <u>65</u> Eastern Meadowlarks were counted in Bridgewater on the 26th (RSH), and 24 were reported on the Plymouth CBC. A few small wintering flocks of Redwinged Blackbirds were noted during the month with a maximum of just 40 on the Nantucket CBC. A number of Northern Orioles were wintering in different areas of eastern Massachusetts as summarized below:

# Northern Orioles:

8,10	Wayland, Ipswich	1, 1	J.Santamaria, JN
15, 18	Canton, Chatham	1, 1	R.Michener, CBC-BN
20, 31	Wayland (different), Rockland	1, 1	H.Chamberlin, fide MJL

Two Rusty Blackbirds were noted at GMNWR on the 16th (RKW), 3 were reported on the Boston CBC, and 2 on the Buzzards Bay CBC. A wintering flock of Common Grackles totaled 150+ in Dedham on the 27th-28th (EC), and a flock of 100 Brown-headed Cowbirds were noted from Littleton on the 4th (JB). Western Tanagers were reported from Nantucket on the 4th-5th (JD), from Manomet on the 13th (MBO staff), and one was picked up dead on the 27th (NH) in Belmont--specimen to MAS. In Boston 141 Cardinals were counted on the CBC, 108 were noted on the Cape Cod CBC and 44 were reported on the Newburyport CBC. An Indigo Bunting was reported from Nantucket (fide EFA) on the 18th for an extremely late record. The only other winter record is from Billerica on 2/22/53 where it remained until 4/14/53. Dickcissels were noted from Truro on the 4th (RMB#) and from Canton on the 26th (BBlakely). Evening Grosbeak totals were not quite as high along the coast as they were inland with Athol reporting 937. Only 3 Purple Finches were reported on the Quincy CBC, while 44 were noted on the nearby Boston CBC. House Finches continue to increase; while not so evident in Greater Boston and Cape Cod, other areas show a marked increase since 1972. Below is a 1972 and 1977 comparison for House Finches.

CBC	1972	1977
Cape Cod	489	462
Greater Boston	139	155
Nantucket	0	86
Newburyport	15	59
Quincy	41	111

As many as 85 Pine Grosbeaks were reported between the 17-31st from 9 localities. Common Redpolls arrived in good numbers at mid-month with 71 on the Worcester CBC, 139 reported on the Boston CBC, and 176 on the Athol CBC. Pine Siskins continued in exceptional numbers and CBC totals include: 122, Worcester; 272, Cape Cod; 487, Boston; 175, Newburyport; and 314 in Athol. The CBC totals for American Goldfinches were normal with 452 in Boston; 318, Cape Cod; 254, Newburyport and 134 in Plymouth. Red Crossbills totaled 36 on the Newburyport CBC and 108 on the Plymouth CBC. The number of White-winged Crossbills continued to increase with 191 reported on the Boston CBC and 199 on the Worcester CBC. Wintering Rufous-sided Towhees include the following CBC totals: Boston, 4; Nantucket, 4; and Plymouth, 3.

On Plymouth Beach 4 "Ipswich Sparrows" were noted on the CBC (TL'D). Two Sharp-tailed Sparrows and 1 Seaside Sparrow were noted at Nauset on the 18th (CBC-WRP); another Sharp-tailed Sparrow was seen in E. Boston on the 10th (RRV#). A Lark Sparrow visited a feeder in Needham on the 5th where it remained through the end of the month (DHottle +v.o.). Dark-eyed Junco CBC totals include: 138, Quincy; 734, Boston; 182, Newburyport; and 268 in Plymouth. High counts of Tree Sparrows include 492 in Newburyport and 361 in Boston CBC's. A Chipping Sparrow was noted in the Barnstable-Sandwich area on the 8th (RFP). Eleven Field Sparrows were noted on both the Quincy and Plymouth CBC's, and 6 were noted from Weston on the 17th (LJR). The sparrow highlight was an immature first winter Harris' Sparrow found in Belmont on the 16th where it remained until the 24th (PM+v.o.). For the 2nd year in a row the Nantucket CBC recorded 12 White-crowned Sparrows; 3 adults were noted from Danvers on the 23rd (RSH) and singles were noted in Stoneham (MM) and on the Boston and Tuckernuck CBC's. White-throated Sparrows were way down from 1976 records as summarized below:

CBC	1976	1977
Cape Cod	485	112
Greater Boston	472	185
Newburyport	153	45
Plymouth	489	93

Twenty-two Fox Sparrows were noted on the Boston CBC and 23 others were recorded from 10 localities. In Lancaster 4 Swamp Sparrows were found from the 18th on (HLM) and 2 were noted on the Newburyport CBC. The totals of Song Sparrows were also down from last year, with 50 in Quincy; 55, Tuckernuck; 203, Boston; 56, Newburyport; and 97 in Plymouth. Lapland Longspurs totaled 40 in Salisbury on the CBC as the month's maximum. On Martha's Vineyard 150 Snow Buntings were found on the CBC and 41 were noted in Framingham on the 25th-26th (RAF).

R. H. S.

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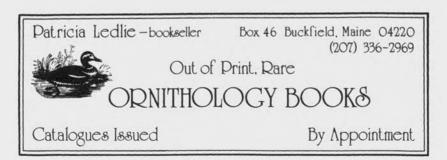
# ADDENDA

November 1977				
Red-breasted Merganser:	11/12	Barnstable	4,700	RFP
Red-shouldered Hawk:	11/16	Brewster	1	CAG
Red Phalarope:	11/11	F.E.	14	WB
Forster's Tern:	11/15	Barnstable	1	RFP
Caspian Tern:	11/3	Eastham	9	CAG
Barn Owl:	11/3			R.Prescott
	-	ly injured-la	ater died)	
	11/25	Hyannis	1	VL
Barn Swallow:	11/12	Orleans	1	BN, CAG
Western Kingbird:	11/10	Eastham	1	CAG
Lincoln's Sparrow:	11/6	Wellfleet	1	BN

#### BIRD SIGHTINGS ON PARKER RIVER REFUGE

Starting immediately "Interesting Observations" sheets will be maintained at the Parker River National Wildlife Refuge (Plum Island). The sheets will be on a clipboard located inside the gatehouse on the western wall at the main entrance to the Refuge.

The personnel would like you to feel free to stop and use these sheets at any time. Even when the gatehouse is unattended, the door is open to allow you to refer to the listings of bird sightings or to record listings of your own observations.



# TIDE CHART

Here is the tide table for Boston Harbor;  $\underline{\text{add}} \ \underline{\text{one}} \ \underline{\text{hour}}$  for Daylight Savings Time.

1978		MAY	TIDES		1978	1978	) MA	Y JUNE	TIDES	)	1978
Morning	BOSTON	Afternoon	Morning	BOSTON	Afternoon	Morning	BOSTON	Afternoon	Morning	BOSTON	Afternoon
gh 11.21		High 11.34 Height 105	High 3.55 Height 6.9	SUNDAY	High 4.31 Height 8.4	High 10.00	SUNDAY	High 10.16	High 3.34	SUNDAY	High 4.
w 5.07		Low 5.19	Low 10.15 Bright 0.7	14	Law 10.36 Height 1.5	Low 3.49	21	Height 11.2 Low 4.04	Height 10.6 Law 9.55	28	Low 10.3
neris 430	MONDAY	Server 0.51	Sentise 4.22		Suntet 0.59	Height -1.1 Sunrice 4.17	21	Neight -0.6 Sunset 7.04	Height -0.9 Suntrine 4.13		Height 6
gh gát		High 1203 Height 9.5	High 4.47 Keeple 8.8	MONDAY	High 5.22 Heght 8.5	High 10.47 Height 10.2	MONDAY	High 11.05	High 4.37	MONDAY	High 5.
w 5.49	8	Low 6.01 Height 0.1	Low 11.06 Knight 0.8	15	Low 11.32	Low 4.38	22	low 4.52	low 10.55	29	Low 11.
Hit 4.25	VIIITERY	Senset 6.52	Sunnin 4.21	TUESDAY	Santet 7.00	Height -1.6 Surrise 4.17	STATE WOOM	Neight -0.8 Susset 7.04	Height -0.5 Succise 4.12	2 rest Greenin	Reght 7
gh 12.15 ph 10.3	10.00	High 12.44 Height 9.3	High 5.41 Heght 8.7		High 6.14 Height 8.7	High 1139 Height 104	TUESDAY	High 11.55 Height 11.7	High 5.39 Height 9.7	TUESDAY	High 6.
e 6.30	9	Low 6.42 Neight 0.4	Low 1159 Neight 0.8	16	Low	Low 5.28	23	Low 5.42	low 11.54	30	Low
aris 4.28		Summer 6.53	Surrise 420		Sunset 7.01	Height -1.9 Santric 4.16	20	Height -0.9 Susset 7.05	Height -02 Sunrice 4.11	-	Beight F
gh 12.55		High 1.26 Hight 9.0	High 6.33 Neight 8.6	WEDNESDAY	High 7.04	High Model	WEDNESDAY	High 12.30	High 6.41	WEDNESDAY	High 7.1
w 7.1.1	10	Low 7.23 Height 07	Low 12.27	17	Low 1250 Height 06	Low 6.18	24	low 6.32	Low 1228	31	low 12.5
arise 4.27		Santei 654	Sunrice 4.19		Sunte 7.02	Height -20 Sentist 4.16	41	Neight -0.9 Serrel 7.06	Sunrise 4.10		Height (
gh 1.37 gh 9.6	THURSDAY	Height 8.8	High 7.27 Neght 90	THURSDAY	High 7.52 Height 9.6	High 12.46 Weight 11.7	THURSDAY	High 1.23 Height 10.4	High 7.42 Height 9.3	THURSDAY	High 8.0 Height 10
7.55 ph -01	11	Low 8.07 Height 0.9	Low 1.19 Height 0.7	18	Low 1.41 Height 0.4	Low 7.08 Height -2.0	25	Low 7.25	Low 1.31		Low 1.4
41114	FRIDAY	Senser 655 High 2.54	Suerray 4.19 High 8.18	FRIDAY	Sunset 7.03	Suntine 4.14		Sanset 7.06	Suerise 410	•	Suntet 7
ph 2:20	1.000	Height 8.6	Height 9.3		Height 10.2	High 1.40 Height 115	FRIDAY	High 2.19 Height 10.2	High 8.39 Height 9.2	FRIDAY	High 8.5 Height 10
8.38	12	Low 8.54 Height 1.2	Low 2.10	19	Low 229 Merght 01	Low 8.01 Weight -1.7	26	Low 8.20 Height -0.4	Low 2.27 Height -0.1	2	Low 2.4
4.25 4 3.05	SATURDAY	Sunist 656 High 3.42	Sanros 418 High 9.09	SATURDAY	Numb 927	Seence 4.14	Control of the Control	Sunset 708	Sentise 4.08	- continues of the later	Sunset 7
M 92	10	Height 8.4	Height 9.6		Height 10.7	High 2.36	SATURDAY	High 3.15 Height 10.0	High 9.30 Height 9.2	SATURDAY	High 9.4 Height 10
9.26	15	Neight 1.4	Low 3.01 Height -05	20	Low 3.16 Neight -0.2	Low 8.57	27	low 9.20	Low 3.17	3	Low 3.5
		Suntal 658									
BOSTON ten Standard Time	MAY And I Nous to	BOSTON - Buylight Springs Time JUNE	SOSTON Exten Standard Trans TIDES	MAY	80STON Burlight Servings Time	BOSTON fasters Standard Time 1978	JUN	BOSTON Daybyht Sevent Time.	BOSTON Eastern Standard Time	MAY-JUNE Add 1 Hour fo	BOSTON BOSTON Descript Savings To
BOSTON tern Standard Time		BOSTON  Daylight Springs Time  JUNE  Afternoon	SOSTON Eastern Standard Tone TIDES Morning	MAY	BOSTON Descript Service Time  1978  Afternoon	BOSTON Letter Standard Time 1978	JUN	BOSTON  Daybyht Savings Time.  IE - JULY  Afternoon	80STON Eathern Standard Time TIDES	BOSTON	BOSTON Deplipht Sames To 1978 Afternoon
BOSTON tern Standard Year 197 Morning igh 10.17	8 BOSTON SUNDAY	BOSTON  Fourlight Springs Time  JUNE  Afternoon  High 10.28	BOSTON Eastern Standard Tone  TIDES  Morning High 2.3.4	MAY	BOSTON Derhight Servings Fine  1978  Afternoon High 3.08	80STON Eastern Standard Vines 1978  Morning High 8.39 Noght 9.5	JUN BOSTON SUNDAY	BOSTON  Dayloght Savange Fune.  IE - JULY  Afternoon  High 8.58 Height 11.0	BOSTON Eastern Standard Time TIDES  Morning High 2.20 Mosple 11.2	BOSTON SUNDAY	BOSTON  Daylight Savings To  1978  Afternoon  High 2.5  Incept 10
BOSTON ten Standard Yine 197 Morning igh 10.17 cph 9. w 4.03	8 BOSTON SUNDAY	BOSTON  Burlight Sarony Time  JUNE  Afternoon  High 10.28  High 10.3  Low 4.12	BOSTON Eastern Standard Time  TIDES  Morning High 2.3.4 Height 9.4 Low 8.52	BOSTON	BOSTON Berlight Servings Fines  1978  Afternoon  High 3.08 Height 87 Low 9.10	## 8.39   High # 8.39   Noght # 9.5   Low # 2.31   Health # 0.6	JUN BOSTON SUNDAY	BOSTON  Depthylat Sevenqu Time.  IE - JULY  Afternoon  High 8.58 Hoopli 11.0 Low 2.45 Hoople -0.2	BOSTON Eastern Standard Time TIDES  Morning High 2.20 Reagle 11.2 Low 8.38 Reacht -1.5	BOSTON SUNDAY	BOSTON  Daylight Service To  1978  Afternoon  High 2.5  Height 10  Low 9.0
Morning Mornin	8 BOSTON SUNDAY	BOSTON Carlold Sarage Time  JUNE  Afternoon  High 10.28 Heigh 10.3 Low 412 Heigh 0.3 Sarast 7.16	BOSTON Eastern Standard Time  TIDES  Morning High 2.3.4 Height 9.4 Low 8.5.2 Hopp 0.2 Superior 4.00	BOSTON SUNDAY	BOSTON Derright Sensey, line  1978  Afternoon High 3.08 feeple 5.7 Low 9.10 freight 1.2 Sunset 7.22	## BOSTON	JUN BOSTON SUNDAY 18	BOSTON  Berlight Seeing Time.  E - JULY  Afternoon High 8.58 Height 11.0 Low 2.45 Height -0.2 Seriet 7.24	## 8 0 5 T O N Earters Standard Time  ### T I D E S  ### Morning  ### Morning  ### 11.2 Low 8.38 Regist -1.5 Sunriss 4.09	EOSTON SUNDAY	BOSTON  Duringht Servings To  1978  Afternoon  High 2.5  Hieght 10  Low 9.0  Height 7.3  Santat 7.3
197  Morning   10.17   20   10.17   10	8 BOSTON SUNDAY 4	BOSTON  Berlight Saring: Time  JUNE  Afternoon  High 10.28 thegist 10.3 Low 4.12 thegist 0.3 Santat 7.10 High 11.09 High 11.09 High 11.09 High 11.09	BOSTON Eastern Standard Time  TIDES  Morning High 2.34 Height 9.4 Low 8.5.2 Hogh 0.3 Sarrise 4.00 High 3.2.1 High 3.2.1 Heigh 9.2	BOSTON SUNDAY MONDAY	## BOSTON	BOSTON   Eathern Standard Trans   1978	JUN BOSTON SUNDAY 18	BOSTON  Berlight Seeing Time.  F - JULY  Afternoon High 8-58 Height 11.0 Low 2.45 Height -0.2 Seriest 7.24 High 9-51 Height 11.5 Height 11.5 Height 11.5	## 8 0 5 T O N  Eartern Standard Time  TIDES  Morning  High 2.20  Meaglat 1.2  Low 8.38  Resight -1.5  Santian 4.09  High 3.18  Resight 10.7	BOSTON SUNDAY 25 MONDAY	BOSTON  Byrlight Serveys To  1978  Afternoon  High 2.5  Height 10  Low 90.  Santar 7.  High 3.5  Heigh 10
197  Morning igh 10.17 ght 9. w 4.03 ght 11.00 tengts 9. w 4.03 ght 4.04 ght 9. w 4.03 ght 4.04 ght 9. w 4.45 ght	8 BOSTON SUNDAY 4 MONDAY 5	BOSTON Derright Springs Tree  JUNE  Afternoon High 10.28 Bright 10.3 Low 13.3 Low 7.3 Sarset 7.3 High 11.09 Bright 10.09 B	BOSTON Interest Standard Time TIDES  Morning High 2.34 Hogh 9.4 Low 8.52 Regis 0.2 Sarrie 4.00 High 3.21 Low 9.39 Low 9.39 Low 9.39 Low 9.39 Low 9.39 Low 9.39	BOSTON SUNDAY	## BOSTON	## 1978    Marring High   8.39	JUN BOSTON SUNDAY 18	BOSTON  Drybph Samue Time  E - JULY  Afternoon  High 8.58 Heigh 11.0 Low 2.45 Heigh -0.2: Samuel 7.24 High 9.51 High 9.51 Low 3.38 Height -0.5	BOSTON Eathern Standard Time TIDES  Morning High 220 Hogal 11.2 Low 8.38 Hogal -15 Santria 409 High 3.18 Hogal 107 Low 9.33 Hogal 107 Low 9.33	BOSTON SUNDAY 25 MONDAY	## Destroy   1978   197
197  Morning 10.17 sph 10.17 sph 20. 10.17 sph 4.03 sph 4.03 sph 11.00 traph 4.03 sph 4.04 sph 4.45 sph 4.45	8 BOSTON SUNDAY 4 MONDAY 5 MIN MONDAY	BOSTON - Dayloght Samoup Trace  JUNE  Afternoon  Heigh 10.28 fleegle 10.3 Low 4.12 fleegle 10.3 samoup 11.0.9 fleegle 10.4 Low 4.12 fleegle 10.4 Low 4.12 fleegle 10.4 Low 4.13 fleegle 10.2	BOSTON Tatters Stendard France TIDES  Morningg High 2.34 hospit 9.2 Low 8.52 Sacritics 4.06 Sacritics 4.06 Low 9.30 High 9.2 Low 9.30 High 4.04 Sacritics 4.06	BOSTON SUNDAY III MONDAY 12	## BOSTON   Durispil Sarrens   Ime   ## 1978	## 1978  ### ### ### ########################	JUN BOSTON SUNDAY 18	## BOSTON	BOSTON   Eastern Standard Time	EOSTON SUNDAY	805TON Perfush Seeings To 1978  Afternoon High 2.5 Merght 2.5 Mergh 2.5 Merght 2.5 Merght 2.5 Merght 2.5 Merght 2.5 Merght 2.5 Mergh
197  Morning igh 10.17 uph 9.0 igh 1.0.0 ph 4.0 igh 1.0.0 ph 4.0 igh 4.45 igh 4.45 igh 4.45 igh 11.41 igh 9.0	8 BOSTON SUNDAY 4 MONDAY 55 MY MONDAY TUESDAY	## BOSTON   Daylight Samoup Trace    JUNE    Afternoon    Heigh   10.28    Regis   10.3    Low   4.12    Regis   10.3    Samoup   10.2    Low   4.12    Regis   10.3    Low   4.12    Regis   10.4    Low   4.12    Regis   10.2    Low   4.12    Regis   10.2    Low   4.12    Regis   10.3    Low   4.12    Regis   10.4    Low   4.12    Regis   10.4    Re	BOSTON TRIDES  Morning High 2.34 Inspire 9.2 Santite 4.00 High 3.21 Santite 4.00 High 0.4 Santite 4.00 High 4.08 High 4.08 High 4.08 High 4.08	BOSTON SUNDAY 11 MONDAY 12 TUESDAY	## 1978  ### 197	## 100   10   100	JUN BOSTON SUNDAY 18 MONDAY 19 TUESDAY	## BOSTON   Derlight Surroge Time    E - JULY	BOSTON	BOSTON SUNDAY 25 MONDAY 26 TUESDAY	BOSTON  Deringht Samaga Ta  1978  Afternoon  High 2.5  Merght 10  Low 90  Low 10  Low
197  Moreing gh 10.11 ghr 20 ghr 4.0 ghr 5.2 g	8 BOSTON SUNDAY 4 MONDAY 5 MIN MONDAY TUESDAY 6	BOSTON - Burjelle Samup Inne  JUNE  Afternoon  High 10.28 heigh 10.3 Low 10.3 Low 10.3 Low 10.3 Low 10.3 Low 10.5 Low 10	BOSTON   Interest Standard Interest   Inter	BOSTON SUNDAY 11 MONDAY 12 TUESDAY 13	## 10 STO N	## BOSTON ### BOSTON #### BOSTON ####################################	JUN BOSTON SUNDAY 18 MONDAY 19 TUESDAY 20	E - JULY	## 10 Stone   Final Standard   Final Sta	BOSTON SUNDAY 25 MONDAY 26 THESDAY 27	## Dept
## 10.17   ## 10.17	8 BOSTON SUNDAY 4 MONDAY 5 MIN MONDAY TUESDAY 6	BOSTON   Daylogle Surroy Insec	BOSTON   Interest Content of the c	BOSTON SUNDAY 11 MONDAY 12 TUESDAY 13 HASE COMMENT	## 1976 ## 1978  ### Afternoon  ###	BOSTON   International Property   Internatio	JUN BOSTON SUNDAY 18 MONDAY 19 TUESDAY	## 10510 N	BOSTON Festers Standard Time TIDES  High 220 Receipt 121 Eow 8.38 Standard 100 Receipt 121 Eow 8.38 Receipt 102 Receipt 102 Receipt 102 Receipt 102 Receipt 102 Receipt 103 Re	BOSTON SUNDAY 25 MONDAY 26 TUESDAY	BOSTON Devided Senses II  1978  Afternoon High 2: High 2: Low 90 Hoght 70 Hoght 10 Low 100 Senses 7 High 3: High 3: High 11 Low 100 High 10 Hi
## 10.17  ## 10.	8 BOSTON SUNDAY 4 MONDAY 55 ME MONDAY TUESDAY 6 WEDNESDAY	Bost   ON   Surpice   Su	BOSTON Intern Standard Final TIDES Morning High 2.34 High 2.34 Low 8.2 Keepit 0.2 Keepit 0.3 Keepit	BOSTON SUNDAY  11  MONDAY  TUESDAY  TUESDAY  WEDNESDAY  WEDNESDAY	## 1978  ### Afternoon  ### 1978  ### Afternoon  ### 1978  ### 1978  #### 1978  #### 1978  ##### 1978  ###################################	DOSTON   Total Student Sea   Total Student S	JUN BOSTON SUNDAY 18 MONDAY 19 TUESDAY OPTRU NO	BOSTON   Foreign Summer Summ	BOSTON Festers Standard Time TIDES  TIDES  High 220 Recipit 120 Recipit 100 Re	BOSTON SUNDAY 25 MONDAY 26 TUESDAY 27 ST LIGHT OGMETER WEDNESDAY	Afternoon High Samue II 1978 Afternoon High Care High Samuel High Samuel High Samuel High Samuel High Samuel High Samuel
## 100 Per 100	8  BOSTON SUNDAY 4 MONDAY 5 MIN MONDAY TUESDAY 6 WEDNESDAY 7	## Syright Surange Free    ### JUNE  ### 10.28    ### 10.	BOSTON   Interest Francisco	BOSTON SUNDAY  11  MONDAY  TUESDAY  TUESDAY  WEDNESDAY  WEDNESDAY	## 1978  ### 197	DOSTON   Tentro Booker   1978	JUN BOSTON SUNDAY 18 MONDAY 19 TUESDAY 20	## 10.51.0 No.	BOSTON   Eastern Standard Fine	BOSTON SUNDAY 25 MONDAY 26 TUESDAY 27 SLAST QUARTER	Afternoon  Afternoon  High 2:  Mreget Low 94,  Hench - 0,  Sastar 7,  High 43,  Hengh 10,  Low 10,  Hengh 2,  Hengh 2,  Hengh 2,  Hengh 10,  Low 10,  Hengh 3,  Hengh 43,  Hengh 43,  Hengh 43,  Hengh 43,  Hengh 54,  Hengh 54,  Hengh 54,  Hengh 54,  Hengh 54,  Hengh 7,  Hengh 7,  Hengh 10,  Low 10,  Hengh 7,  Hengh 10,
197  Morning gh 10.11  A00  physical A00  ph	8 BOSTON SUNDAY 4 MONDAY 5 MM MONDAY 1085DAY 6 WEDNESDAY 7	## 10.510 N  ## 10.510 N  ## 10.52 N  ## 10.28  ## 10.28  ## 10.28  ## 11.09  ## 12.00  ## 12.00  ## 12.00  ## 12.00  ## 12.00  ## 12.00  ## 12.00  ## 12.00  ## 12.00  ## 12.00  ## 12.00  ## 13.00	BOSTON   Intern Standard France   International Processing	BOSTON SUNDAY 11 1 MONDAY 12 TUESDAY 13 OMERICA WEDNESDAY 144	## 1978  #### 1978  #### 1978  #### 1978  #### 1978  #### 1978  #### 1978  #### 1978  #### 1978  #### 1978  #### 1978  ##### 1978  ##### 1978  ##### 1978  ##### 1978  ###################################	BOSTON   Fators Depart law   Fators	JUN BOSTON SUNDAY 18 MONDAY 19 TUESDAY OPTRU NO	## 10.51 ON Foreign Fo	ROSTON   Earlier Standard Time	BOSTON SUNDAY 25 MONDAY 26 TUESDAY 27 ST LIGHT OGMETER WEDNESDAY	BOSTON Periods Senson 1 1978  Afternoon High Senson 1 22 Senson 1 20 Senson 1
197  Moraing gh 10.17  Moraing Morai	8  EOSTON SUNDAY 4 MONDAY 5 MIN MONDAY TUESDAY 7 THURSDAY THURSDAY	BOSTON	BOSTON   Intern Standard France   International Processing	B OSTON SUNDAY 11 MONDAY 12 TUESDAY 13 HAST COMMENT WEONESDAY 14 THURSDAY	## 1976 ## 1978  ### 1978  ### 1978  ### 1978  ### 1978  ### 1978  ### 1978  ### 1978  ### 1978  ### 1978  ### 1978  ### 1978  ### 1978  ### 1978  ### 1978  ### 1978  ### 1978  ### 1978  ### 1978  #### 1978  #### 1978  #### 1978  #### 1978  #### 1978  #### 1978  ##### 1978  ###################################	DOSTON   Total Book   Total B	JUN BOSTON SUNDAY 18 MONDAY 19 TUESDAY 20 PARA BOOK WEDNESDAY 21 THURSDAY	BOSTON   Toronto   Toron	BOSTON	BOSTON SUNDAY 25 MONDAY 26 THESDAY 27 SULT CHAPTER WEDNESDAY 28 THURSDAY	BOSTON IN Partired Samous II 1978  Afternoon High Samous II 1978  Afternoon Low 96, 1978  Low 100, 1978  High 25, 1978  High 10, 1978  Low 100, 1978  High 54, 1978  Low 100, 1978  Low 100, 1978  High 64, 1978  Low 100, 1978  Low 10
197  Morning  1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1	8  EOSTON SUNDAY 4 MONDAY 5 MIN MONDAY TUESDAY 7 THURSDAY THURSDAY	BOSTON   DUNCE   DUN	BOSTON   Intro Standard Iran	B OSTON SUNDAY 11 MONDAY 12 TUESDAY 13 HAST COMMENT WEONESDAY 14 THURSDAY	### 1978  ###################################	DOSTON   Tentro Booker   Ten	BOSTON SUNDAY 18 MONDAY 19 TUSDAY 20 PRIL MOOR WEDNESDAY 21 THURSDAY	## 10.51.0 No.   Post	BOSTON	BOSTON SUNDAY 25 MONDAY 26 TUESDAY 27 S_UST COMMITTEE WEENESDAY 28	BOSTON Derright Sames, 1 and 1
## 10.11 ##	8  BOSTON SUNDAY 4  MONDAY 5 5 THUSDAY 6  WEDNESDAY THURSDAY THURSDAY 8	BOSTON   Description   Descr	BOSTON   Interest Free   Int	BOSTON SUNDAY 11 1 MONDAY 12 TUESDAY 13 OMERICA WEDNESDAY 144	## 1976   100   10	No.	JUN BOSTON SUNDAY 18 MONDAY 19 TUESDAY 20 PRAL MOON WEDNESDAY 21 THURSDAY 22 FRIDAY	## 10.51 O No	BOSTON	BOSTON SUNDAY 25 MONDAY 26 THESDAY 27 SULT CHAPTER WEDNESDAY 28 THURSDAY	BOSTON Derright Sames, 1 and 1
## 10.00   10.	SUNDAY  SUNDAY  4  MONDAY  SUNDAY  FRIDAY  SUNDAY  TUESDAY  THURSDAY  THURSDAY  THURSDAY  REDMESDAY	BOSTON   Description   Descr	BOSTON   Intro Standard Iran	BOSTON SUNDAY 111 MONDAY 122 TUESDAY WEDNESDAY 144 THURSDAY 115	## 1978  ##	DOSION   Total State   Total	JUN BOSTON SUNDAY 18 MONDAY 19 TUESDAY 20 PRAL MOON WEDNESDAY 21 THURSDAY 22 FRIDAY	## 10510 No.   Post   P	BOSTON	BOSTO N SUNDAY 25 MONDAY 26 TILESDAY 27 SULUS GIMTIN WEDNESDAY 28 THURSDAY 29 FRIDAY	BOSTON Derright Sames, 1 and 1
## BOSTON  197  Macraing  India	SUSTON SUNDAY MONDAY SUBSON TUESDAY THURSDAY THURSDAY THURSDAY REDAY	### STORM   ### ST	BOSTON   Intro Standard Iran	BOSTON SUNDAY 11 MONDAY 12 TUESDAY IS JUESDAY IS HUST QUARTER WEDNESDAY 14 THURSDAY 15	### 100   ### 10	No.	JUN BOSTON SUNDAY 18 MONDAY 19 TUESDAY 20 PRIL MOON WEDNESDAY 21 THURSDAY 22	## DESTON ## DES	### Description   ### Descript	BOSTON SUNDAY 25 MONDAY 26 TUESDAY 27 Suir Quartin WEONESDAY 28 THURSDAY	BOSTON Derividal Susue, 1978  Afternoon  High 2.2  Low 9.0  Keeper 9.0  Santar 7.7  High 10.0  Santar 7.7  High 2.2  Low 9.0  Santar 7.7  High 2.2  Santar 7.7
## BOSTON  197  Moreing  ph 10 10 10 10 10 10 10 10 10 10 10 10 10	SUSTON SUSTAN SUSTON SU	BOSTON   Description   Descr	BOSTON   Intro Standar   Int	BOSTON SUNDAY 111 MONDAY 122 TUESDAY WEDNESDAY 144 THURSDAY 115	### 1976   ### 1978	DOSTON   Tentro Student See   Tentro Student See   Tentro See   Tent	JUN BOSTON SUNDAY 18 MONDAY 19 TUESDAY 20 PRAL MOON WEDNESDAY 21 THURSDAY 22 FRIDAY	## DOSTON  ## Foreign Services Services  ## Foreign	BOSTON	BOSTO N SUNDAY 25 MONDAY 26 TILESDAY 27 SULUS GIMTIN WEDNESDAY 28 THURSDAY 29 FRIDAY	DOSTON   Derividal Susura   Doston   Derividal Susura   Doston   Desivation   Des
BOSTON  197  Morning the Standard Temperature of the Stand	SUNDAY  SUNDAY  4  MODAY  THUSDAY  THUSDAY  THUSDAY  THUSDAY  THUSDAY  THUSDAY  THUSDAY  SATURDAY	BOSTON   Description   Descr	BOSTON   Intrins Tanker   Intrins Tank	BOSTON SUNDAY 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	## 1978  ##	DOSTON   Tentro Booker   Ten	BOSTON BOSTON 18 MONDAY 19 TUESDAY 20 PTOL MOOR WEDNESDAY 21 THURSDAY 22 FRIDAY 23 SATURDAY	## DOSTON	BOSTION	BOSTON SUNDAY 25 MONDAY 26 TUESDAY 27 STULL COMMEN WEDNESDAY 28 THURSDAY 29 FRIDAY 30	BOSTON   Derright Street, 1
197  Morning  1 0 17  Morning  ph 10.17  ph 403  ph 10.00  ph 10	S BOSTON SUNDAY A SON TUESDAY THURSDAY THURSDAY THURSDAY THURSDAY THURSDAY SATURDAY SATURDAY SATURDAY	BOSTON   DUNCE   DUN	BOSTON   Intro Standar   Int	BOSTON SUNDAY 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	### 1976   ### 1978	DOSTON   Tentro Student See   Tentro Student See   Tentro See   Tent	SUNDAY 18 MONDAY 19 TUESDAY 2 OO PRIL BOOM WEDNESDAY 21 THURSDAY 22 FRIDAY 23 SATURDAY 24	EUSTION   The property   The prope	### Description   ### Descript	BOSTON SUNDAY 25 MONDAY 26 TUESDAY 27 STULL COMMEN WEDNESDAY 28 THURSDAY 29 FRIDAY 30	BOSTON 1976 Afternoon High 2 Increase High 2 Low 9 High 3 High 5 High 6 High 7

# Tidal differences from Boston High Tide

Newburyport		31	minutes	later
Scituate		5	minutes	earlier
Plymouth		5	minutes	later
Chatham (outside)		30	minutes	later
(inside)	(1 hr)	54	minutes	later
New Bedford			minutes	