

Explanation

Lithologic patterns



Pebbles



Sand



Laminated sand



Interbedded sand and silt



Interbedded sand and clay



Muddy sand



Silt



Interbedded silt and clay



Silty mud or silty clay



Mud or clay



Peat



Organic-rich mud



Organic-rich sand

Physical Characteristics



Root mat



Root fragment



Organic clast



Woody fragment



Shell hash



Shell fragments



Laminated bedding

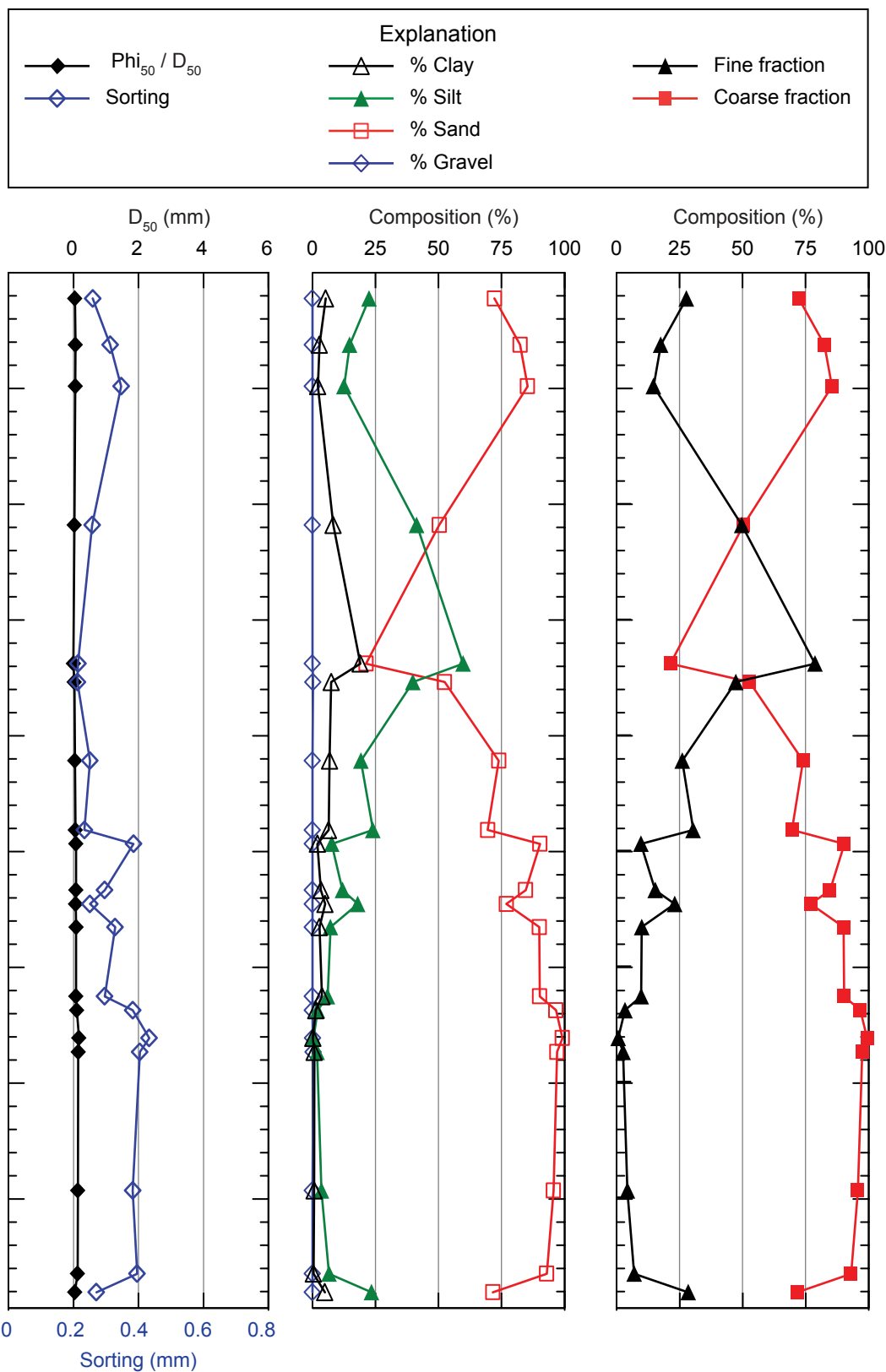


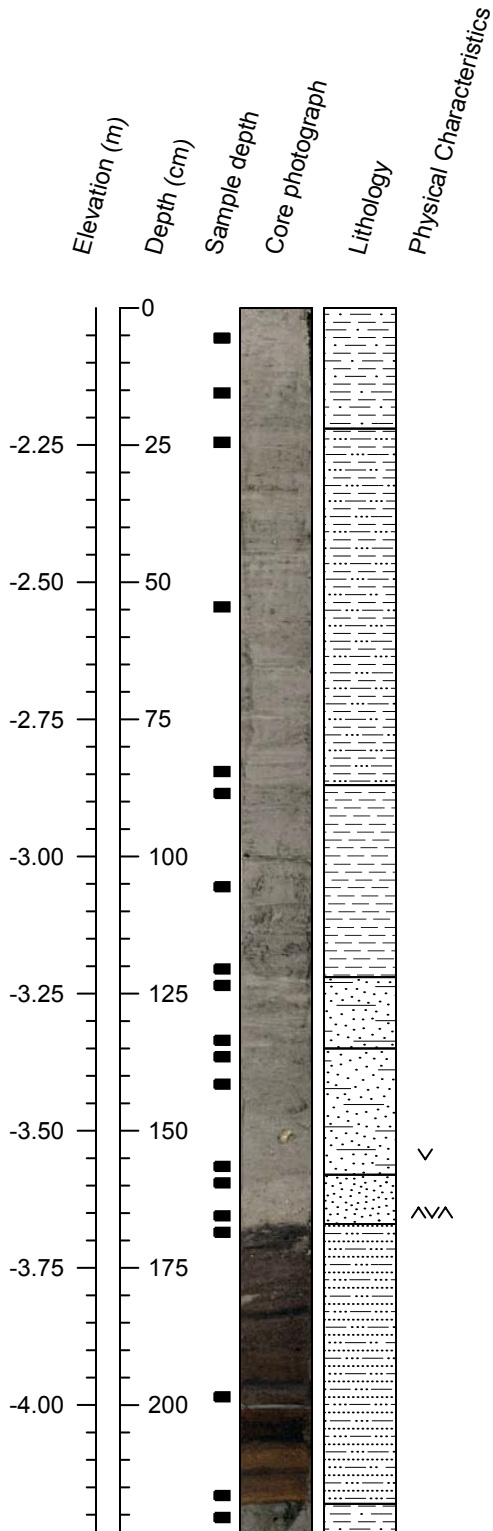
Deformed bedding



Inclined bedding or contact

Core ID: SPCMSC-01



Core ID: SPCMSC-01**Latitude:** 39.96273 N **Elevation:** -2.00 m**Longitude:** 74.10264 W **Core Length:** 224 cm**Location:** Barnegat Bay - WSW Lavalette**Lithologic Description**

0 - 22 cm: MUD, very dark gray (2.5 Y 3/1), organic-poor silty mud with disseminated very small mica flecks and gradational basal contact

22 - 87 cm: MUD and SILT, very dark grayish-brown (2.5 Y 3/2) silty mud with thin, gray (2.5 Y 5/1), silt to very fine-grained sand interbeds

87 - 122 cm: MUD, very dark gray (2.5 Y 3/1), organic-poor mud with occasional thin silt interbeds and moderate disseminated mica flecks

122 - 135 cm: MUDDY SAND, gray (2.5 Y 5/1) muddy sand with light gray (2.5 Y 7/1), very fine-grained sand interbeds and scattered mica flecks

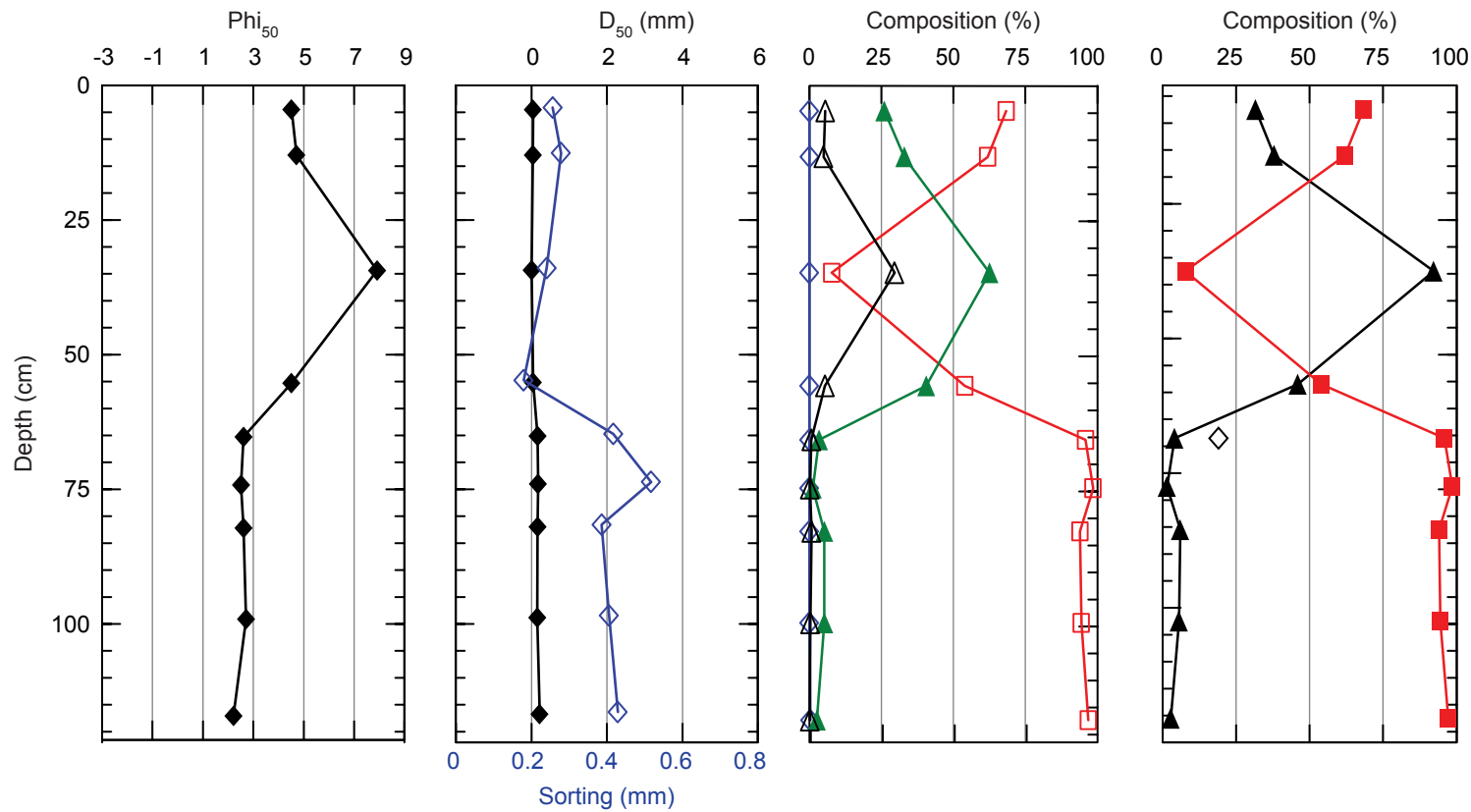
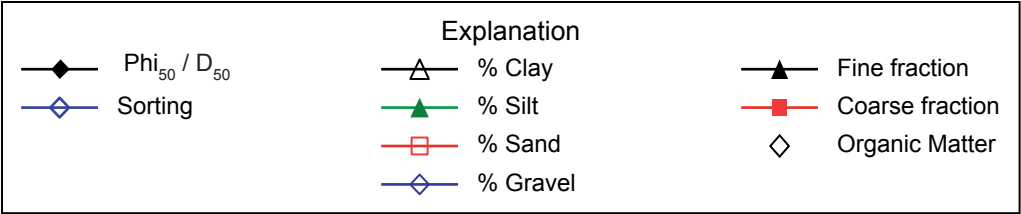
135 - 158 cm: MUDDY SAND, massive, dark gray (2.5 Y 4/1), very fine-grained sand with scattered shell fragments and an articulated razor clam shell at 154 cm

158 - 167 cm: SHELLY SAND, gray (2.5 Y 6/1), moderately sorted, fine-grained shelly sand with coarse-grained sand lenses

167 - 218 cm: SAND and SILT, very dark brown (7.5 YR 2.5/2) silt interbedded with dark brown (7.5 YR 3/2) to brown (7.5 YR 4/6), fine-grained sand; with a dark brown (7.5 YR 3/3), coarse-grained sand horizon from 203 - 206 cm

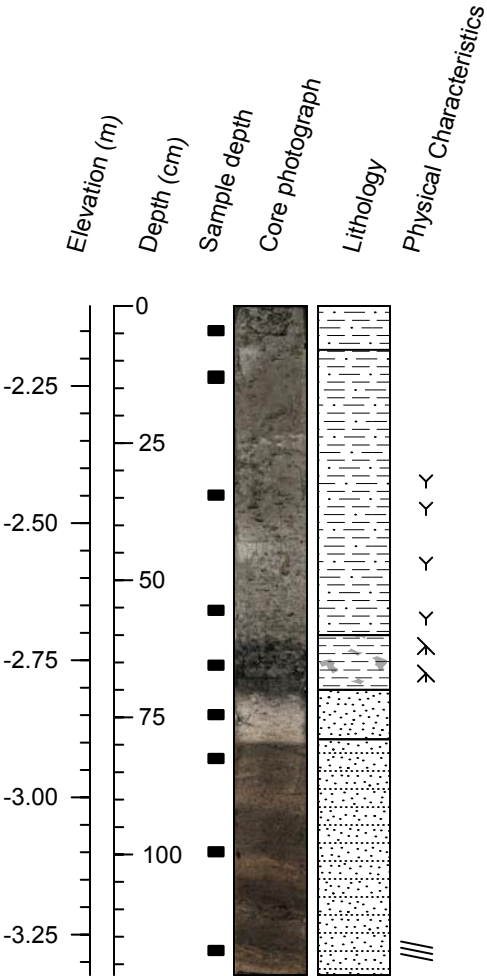
218 - 224 cm: SILTY MUD, massive, very dark gray (2.5 Y 3/4), silty mud

Core ID: SPCMSC-02



Core ID: SPCMSC-02

Latitude: 40.00545 N Elevation: -2.10 m
Longitude: 74.09111 W Core Length: 122 cm
Location: Barnegat Bay - E Silverton



Lithologic Description

0 - 8 cm: MUD, very dark gray (2.5 Y 3/1), saturated silty mud

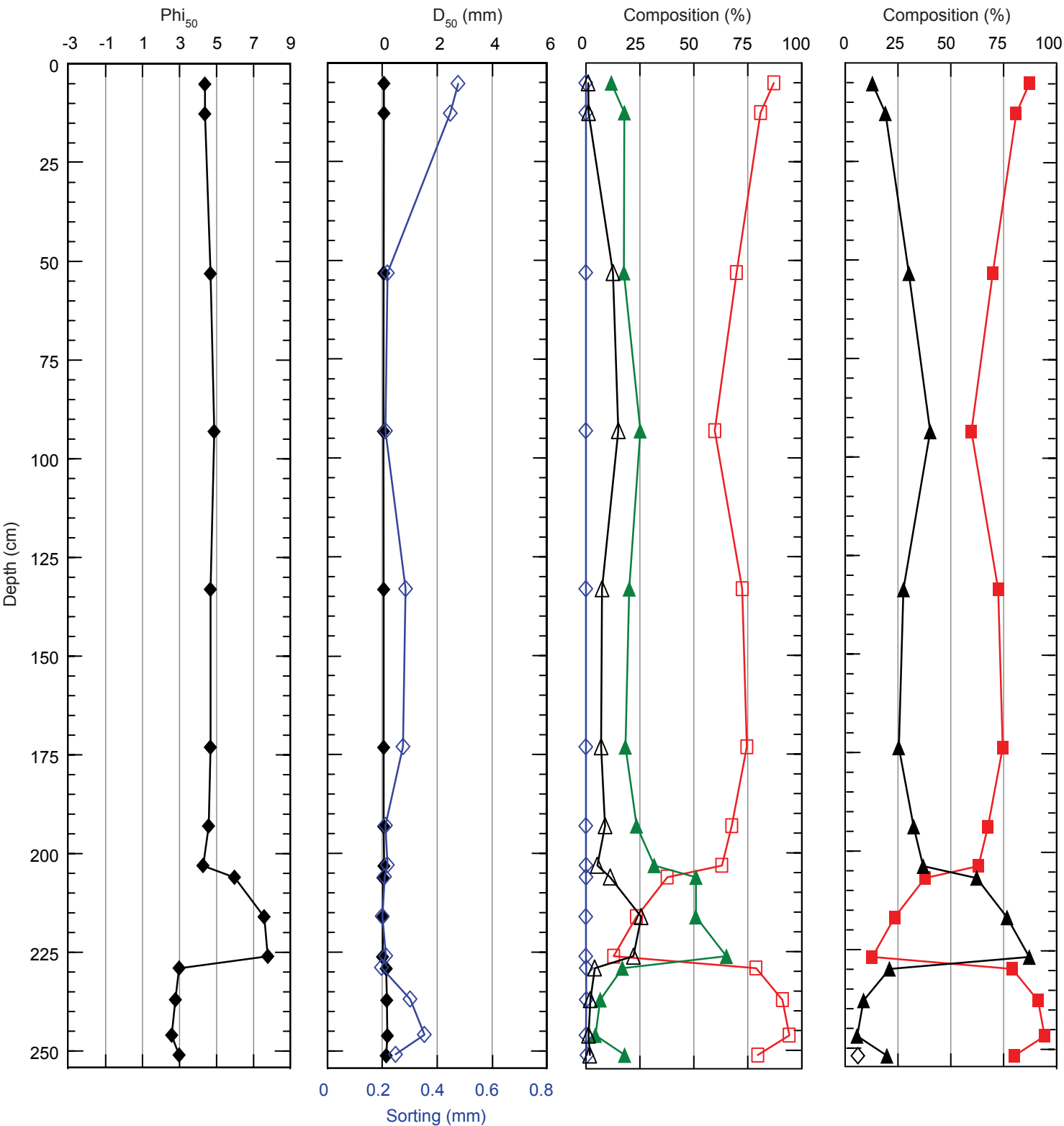
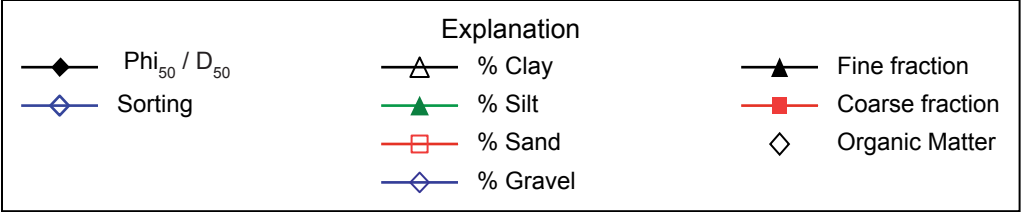
8 - 60 cm: MUD, mottled, very dark gray (2.5 Y 3/1) silty mud, with lenses of clean clay and disseminated small organic fibers and woody fragments; clay content decreases down-core

60 - 70 cm: ORGANIC-RICH MUD, black (10 YR 2/1) organic-rich mud and hemic peat, with disseminated small, degraded root fragments

70 - 79 cm: SAND, massive, gray (5 Y 5/1), well sorted sand with darker gray muddy clasts

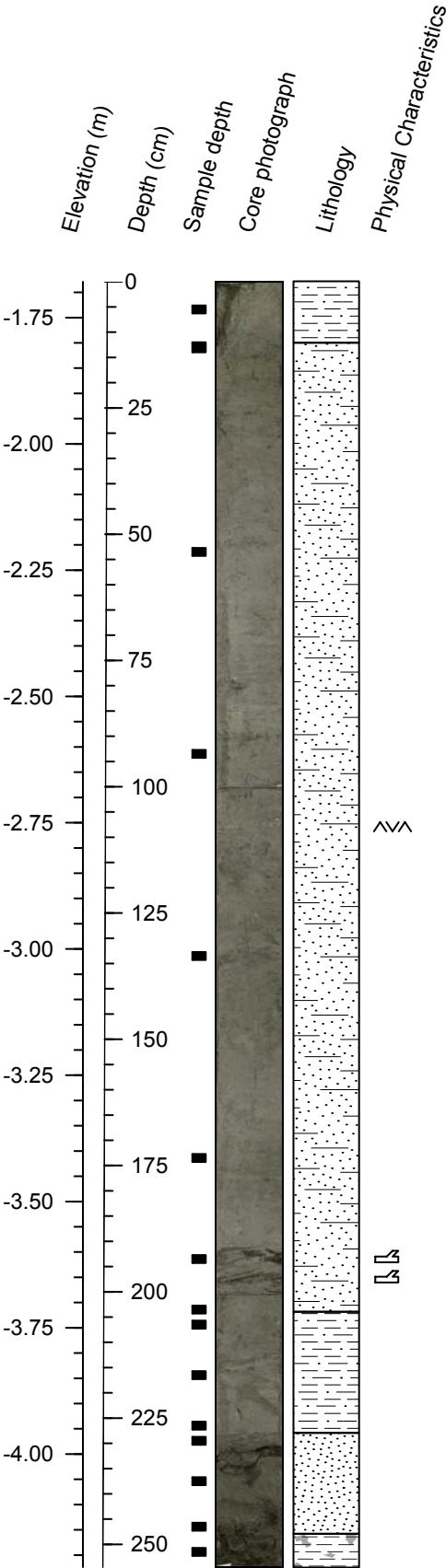
79 - 122 cm: SAND, laminated light reddish-brown (5 YR 2.5/2), well sorted, medium-grained sand and dark reddish-brown (5 YR 3/4), well sorted, very fine- to fine-grained muddy sand, with inclined bedding from 116 - 120 cm and disseminated black organic flecks and scattered shell fragments

Core ID: SPCMSC-03



Core ID: SPCMSC-03

Latitude: 39.97770 N Elevation: -1.68 m
Longitude: 74.09868 W Core Length: 254.5 cm
Location: Barnegat Bay - WNW Lavalette



Lithologic Description

0 - 12 cm: MUD, massive, dark grayish-brown (5 YR 3/2) to black (2.5 Y 2.5/1), organic-rich silty mud with scattered mica flecks

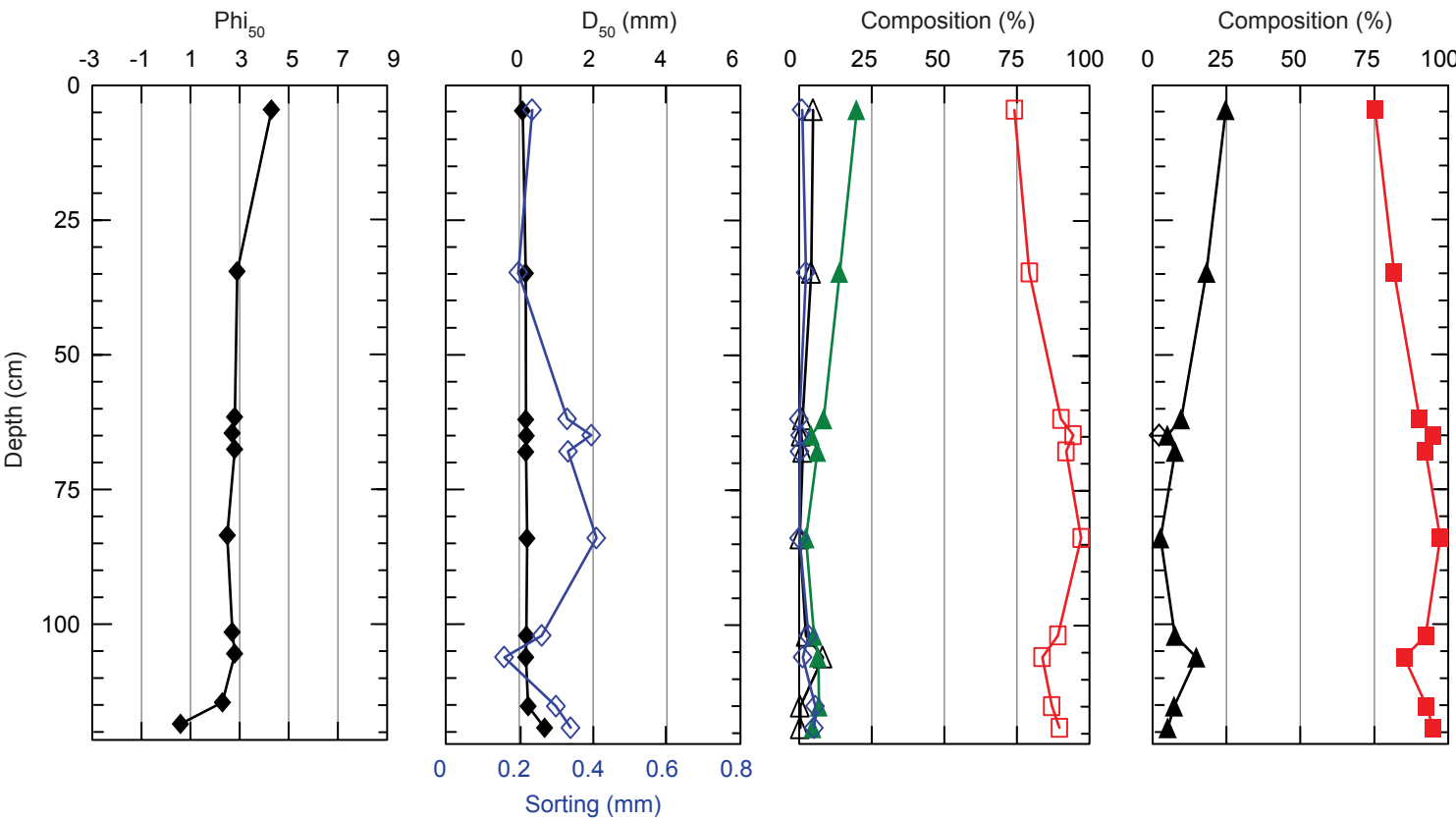
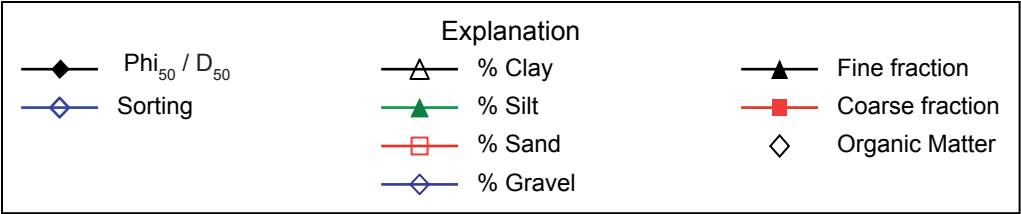
12 - 205 cm: MUDDY SAND, mottled dark gray (2.5 Y 4/1) and dark grayish-brown (2.5 Y 4/2) muddy sand with abundant disseminated small mica flecks and scattered shell fragments; with a thin, inclined, shell hash horizon at 107 cm and abundant wood fragments from 191-200 cm

205 - 228 cm: SILTY CLAY, dark grayish-brown (2.5 Y 4/2) silty clay with mica flecks in disseminated large silty clasts and sharp basal contact

228 - 248 cm: SAND, massive, dark grayish-brown (2.5 Y 4/2), moderately sorted, muddy fine- to medium-grained sand with sharp basal contact

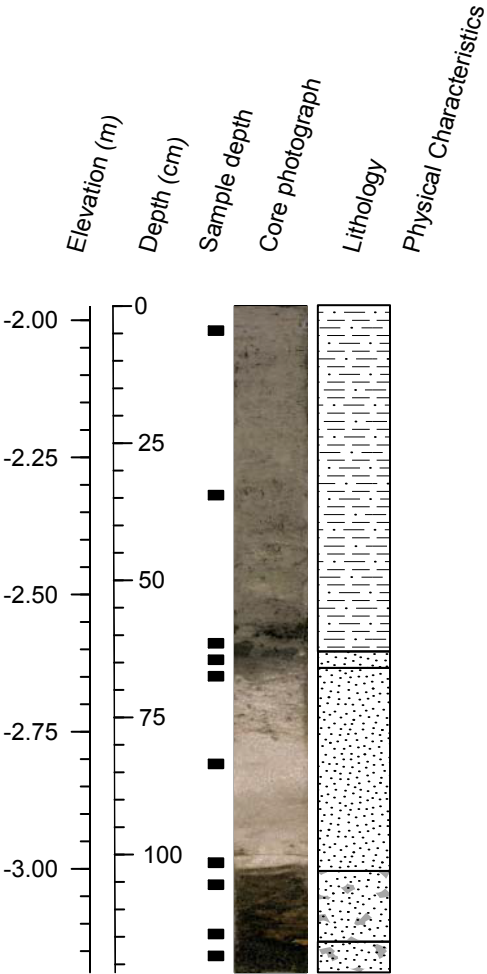
248 - 254.5 cm: ORGANIC-RICH MUD, massive, dark brown (7.5 YR 3/2), organic-rich silty mud

Core ID: SPCMSC-04



Core ID: SPCMSC-04

Latitude: 39.9789380 N Elevation: -1.97 m
Longitude: 74.1066506 W Core Length: 121.5 cm
Location: Barnegat Bay - WNW Lavalette



Lithologic Description

0 - 63 cm: SILTY MUD, very dark gray (2.5 Y 3/1) silty mud with scattered mica flecks, a 2-cm diameter coarse-grained sand clast at 45 cm, and a highly degraded organic lens at base of unit; silt content increases down-core

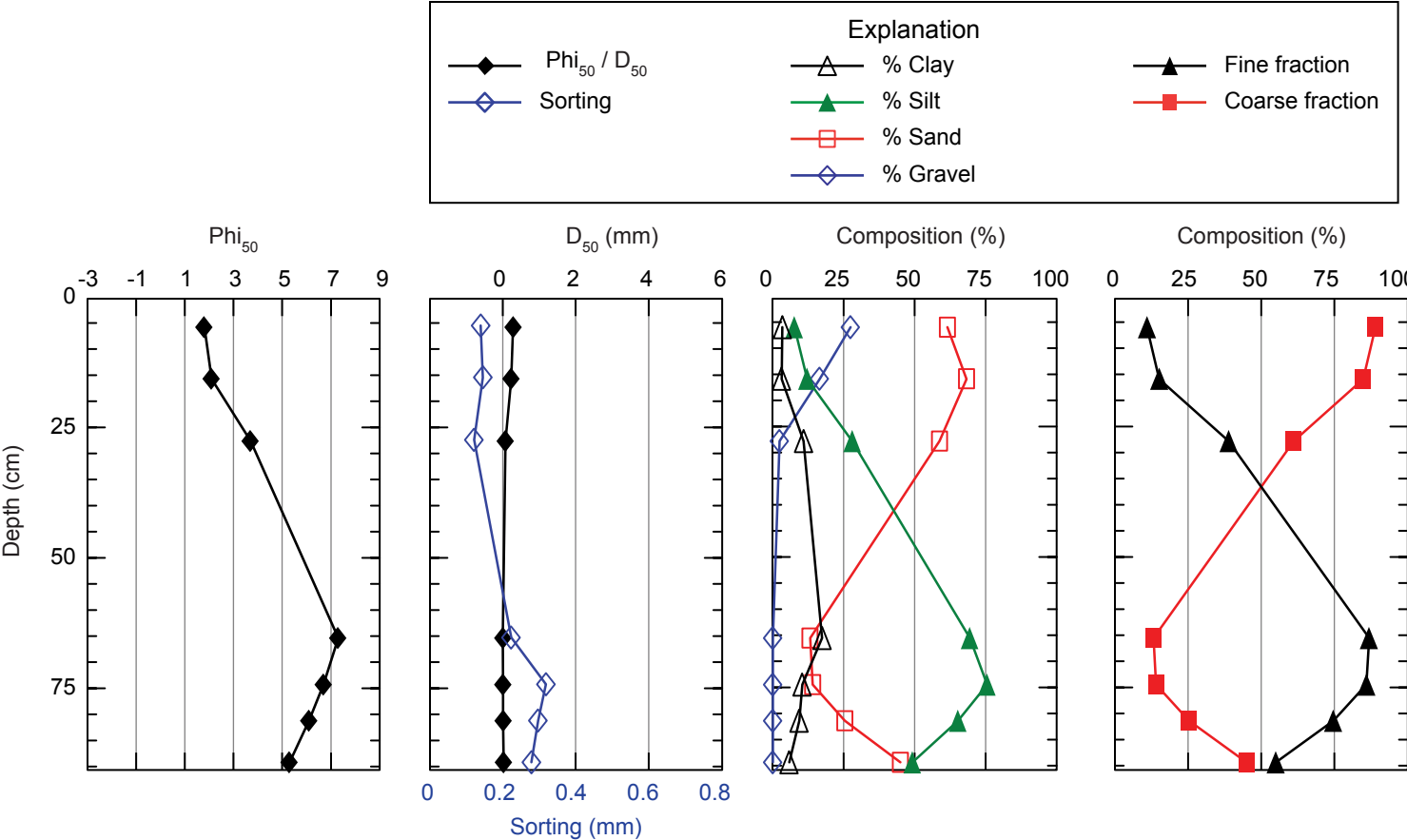
63 - 66 cm: SAND, black (2.5 Y 2.5/1), well-sorted, medium-grained organic sand

66 - 103 cm: SAND, massive, clean, light gray (2.5 Y 7/1), moderately sorted, fine- to medium-grained quartz sand; scattered organic clasts become less common down-core

103 - 116 cm: ORGANIC-RICH SAND, very dark brown (7.5 YR 2.5/2), organic-rich muddy sand with lenses of coarser-grained, dark brownish-black (7.5 YR 2.5/1), organic-rich sand and a large pebble at basal contact

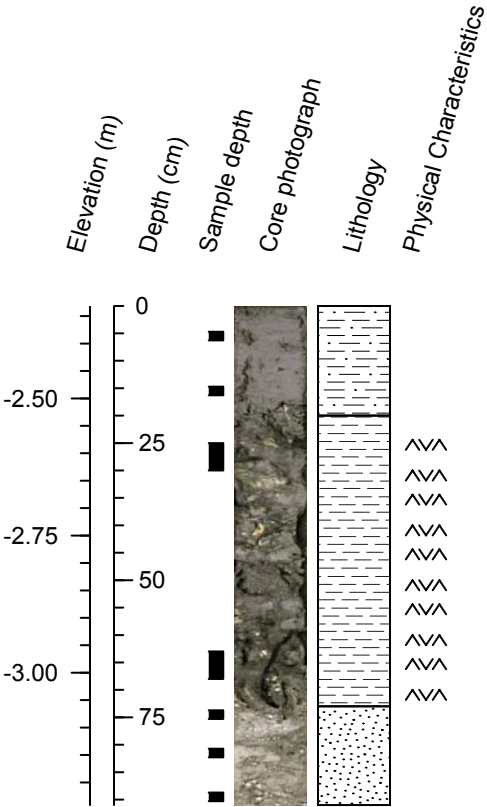
116 - 121.5 cm: ORGANIC-RICH SAND, very dark brownish-black (7.5 YR 2.5/1), coarse-grained, organic-rich sand

Core ID: SPCMSC-05



Core ID: SPCMSC-05

Latitude: 40.01690 N Elevation: -2.33 m
Longitude: 74.07380 W Core Length: 91 cm
Location: Barnegat Bay - SSW Mantaloking



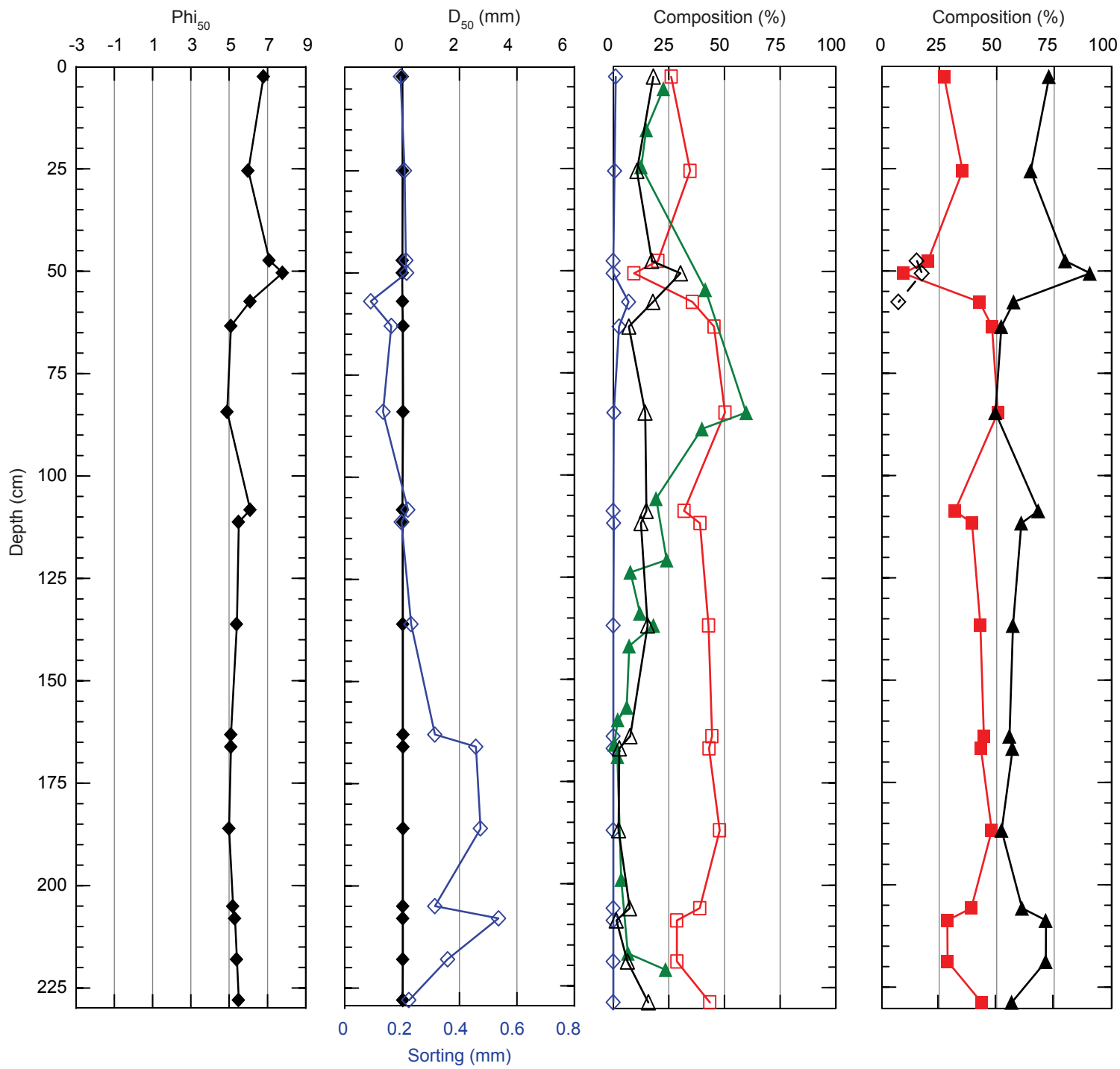
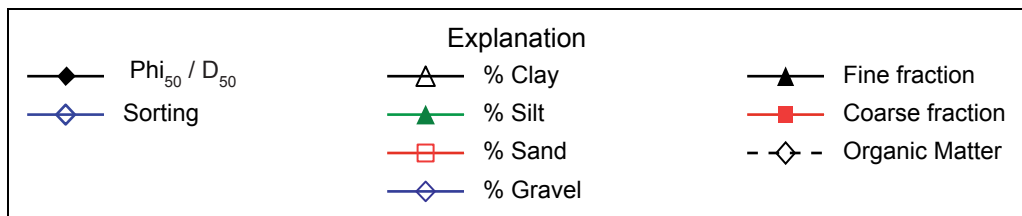
Lithologic Description

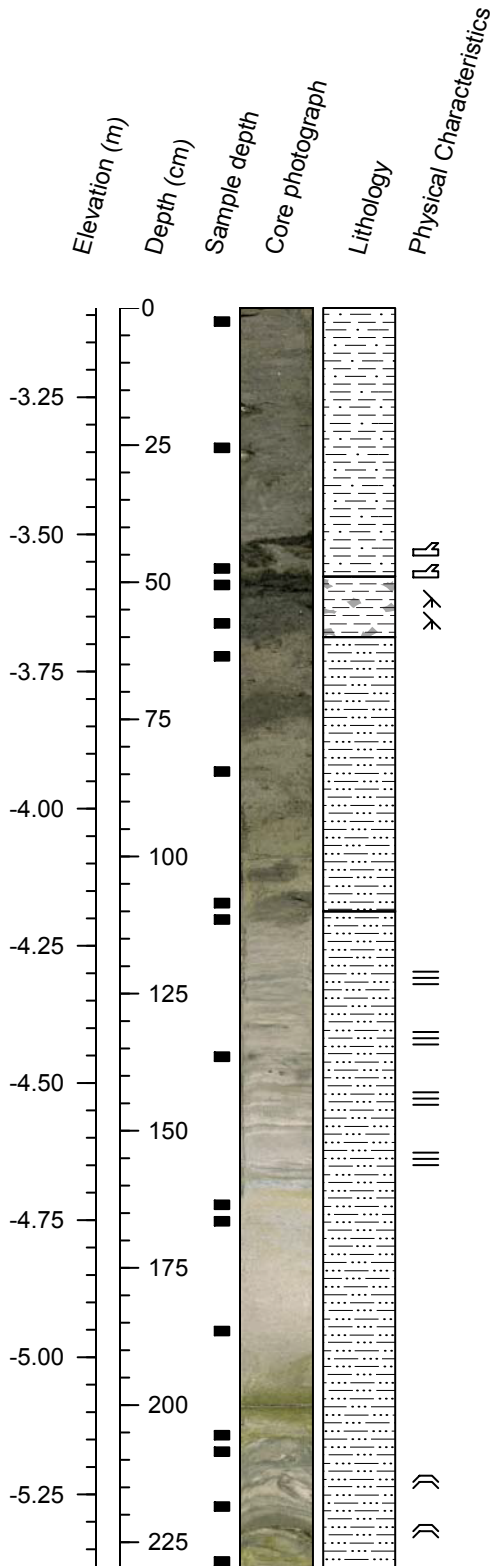
0 - 20 cm: MUD, massive, very dark brown (7.5 YR 3/1), silty mud

20 - 73 cm: SHELLY MUD, inarticulated and articulated oyster shells in a very dark gray (7.5 Y 3/1) muddy matrix with sharp basal contact; shells comprise about 70% of the unit

73 - 91 cm: SAND, gray (7.5 YR 6/1) to light gray (7.5 YR 7/1), moderately sorted, fine- to medium-grained sand with abundant quartz pebbles; pebbles become more common down-core

Core ID: SPCMSC-06



Core ID: SPCMSC-06**Latitude:** 39.83138 N**Elevation:** -3.09 m**Longitude:** 74.14223 W**Core Length:** 230 cm**Location:** Barnegat Bay - W Mouth Forked River**Lithologic Description**

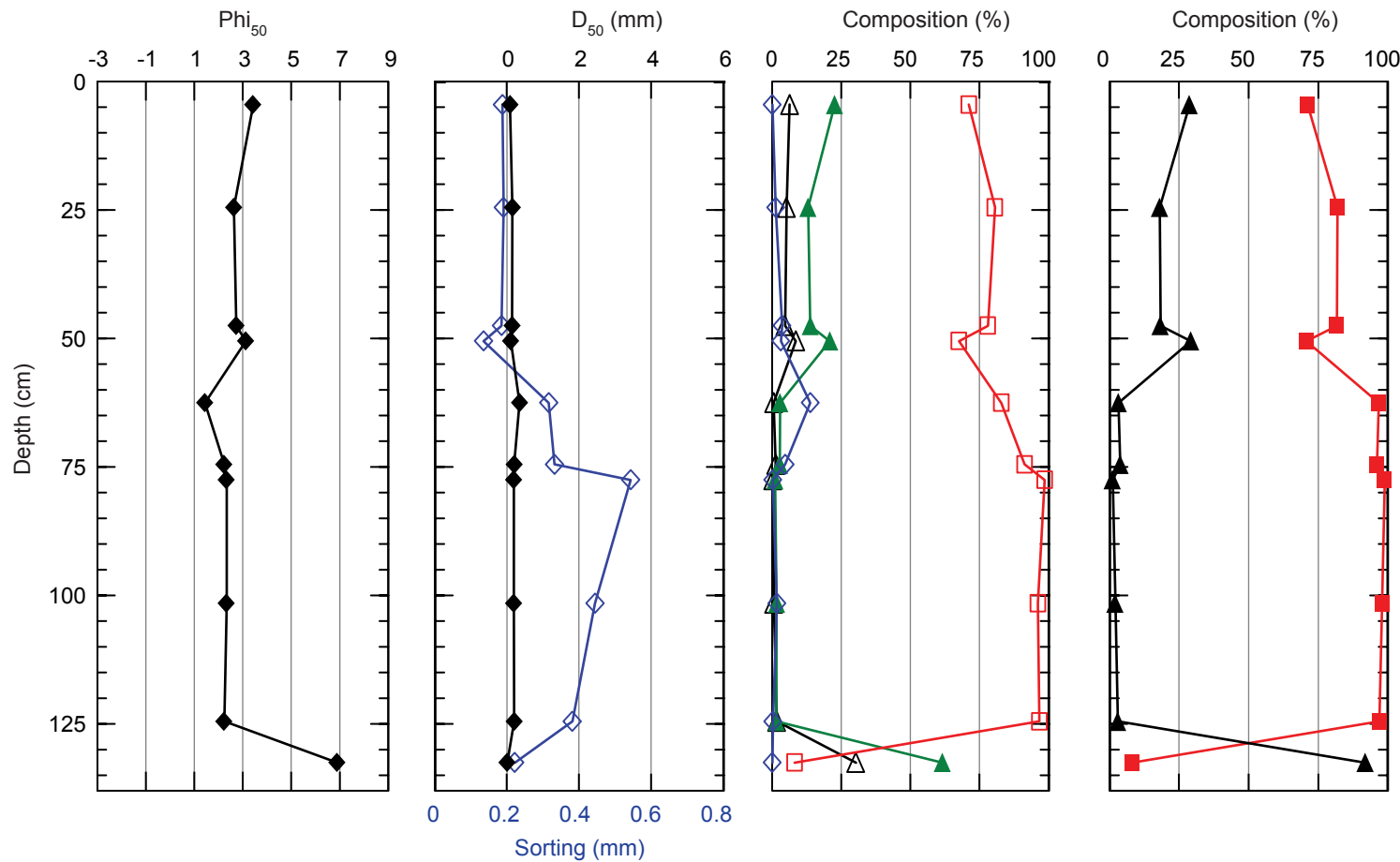
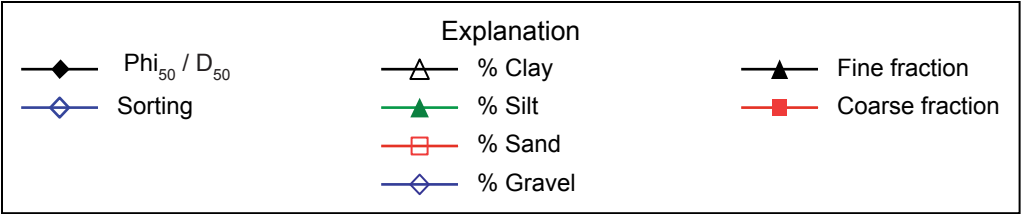
0 - 49 cm: SILTY MUD, very dark gray (7.5 YR 3/1) silty mud with orange-brown (7.5 YR 4/6) and dark gray (7.5 YR 4/1) mottling; with large (1 cm diameter) pebbles at 19 and 27 cm and very dark brown (7.5 YR 2.5/2) organic-rich lenses and small wood fragments from 44-49 cm

49 - 60 cm: ORGANIC-RICH MUD, very dark brown (7.5 YR 2.5/2) organic-rich mud with abundant, very small, degraded organic fragments

60 - 110 cm: SILT, dark gray (10 YR 4/1) to gray (10 YR 5/1) clayey silt; organic content decreases down-core

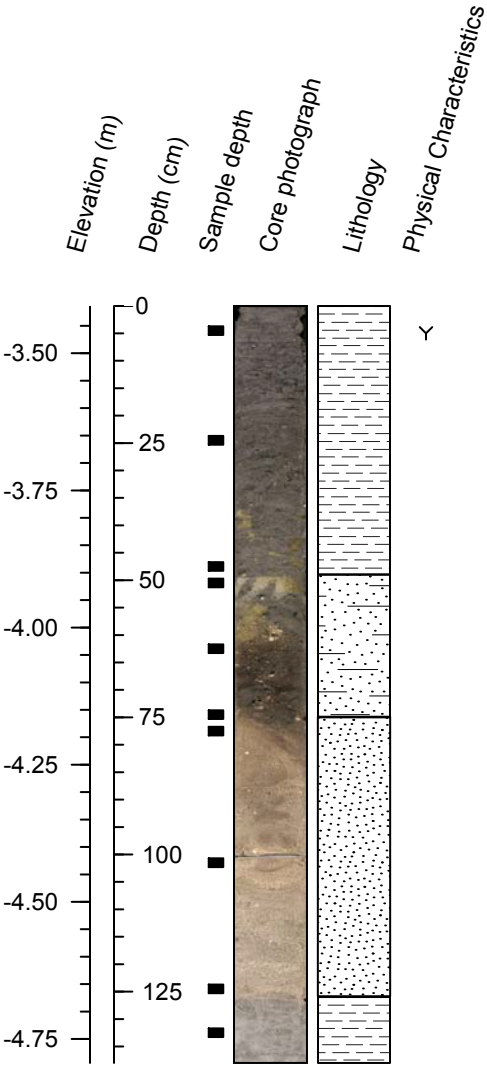
110 - 230 cm: SILT, laminated light olive-gray (5 Y 6/2), dark gray (5 Y 4/1), and olive (5Y 5/4) clayey silt; with horizontal laminations from 110-165 cm, faint laminations from 165-207 cm, deformed bedding from 207-230 cm, and a concave-down indurated clay horizon at 223 cm

Core ID: SPCMSC-07



Core ID: SPCMSC-07

Latitude: 39.84609 N Elevation: -3.41 m
Longitude: 74.12758 W Core Length: 138 cm
Location: Barnegat Bay - W Island Beach State Park



Lithologic Description

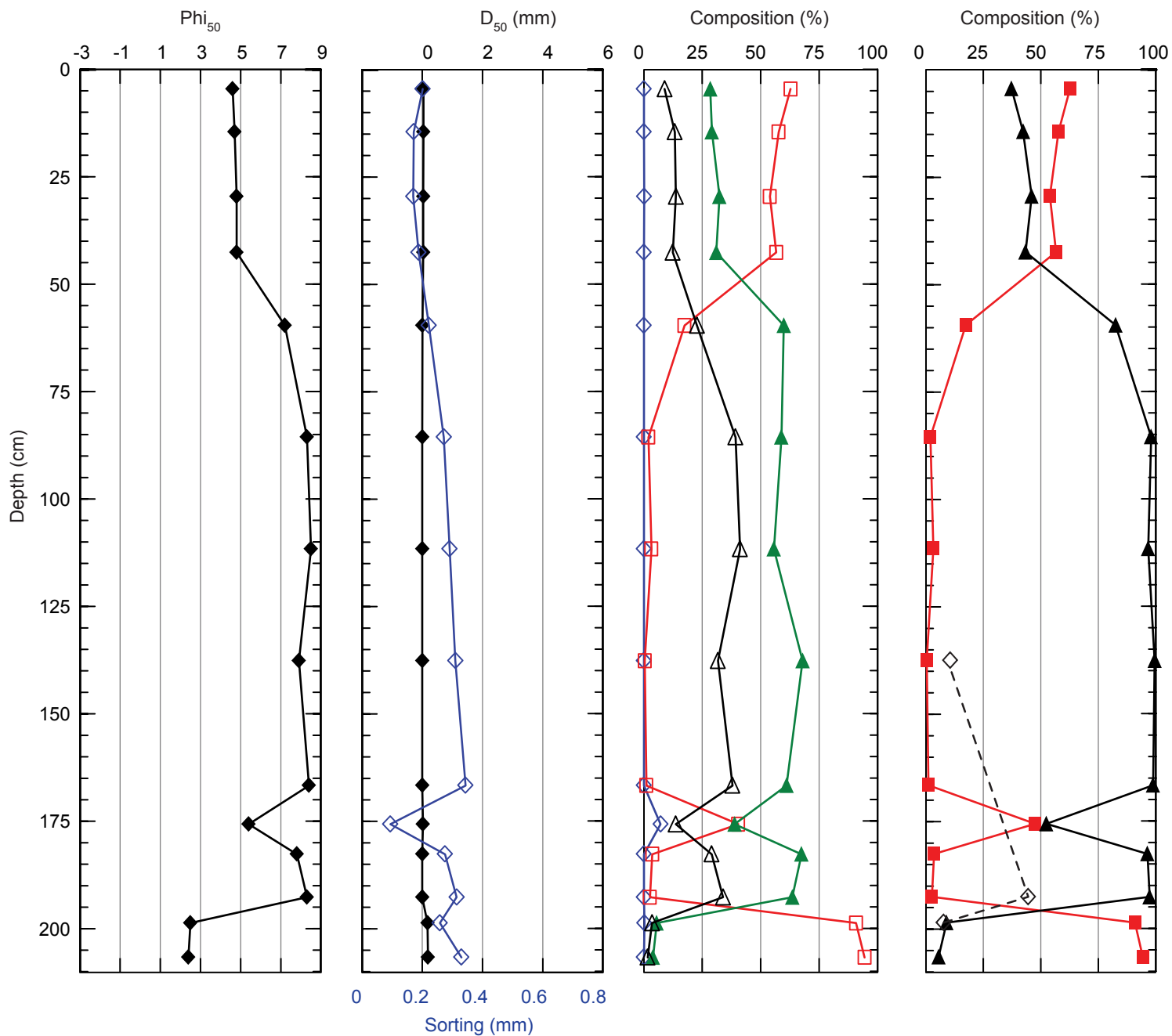
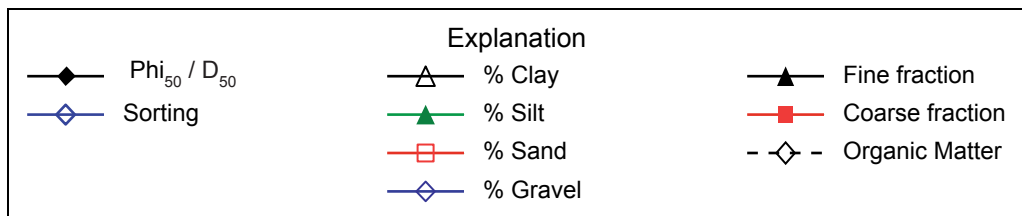
0 - 49 cm: MUD and MUDDY SAND, mottled dark gray (2.5 Y 4/1) mud and muddy sand, with scattered shell fragments, occasional small, olive-brown (2.5 Y 5/6) muddy sand lenses, and a few organic fragments at the top of the core; organic content decreases down-core

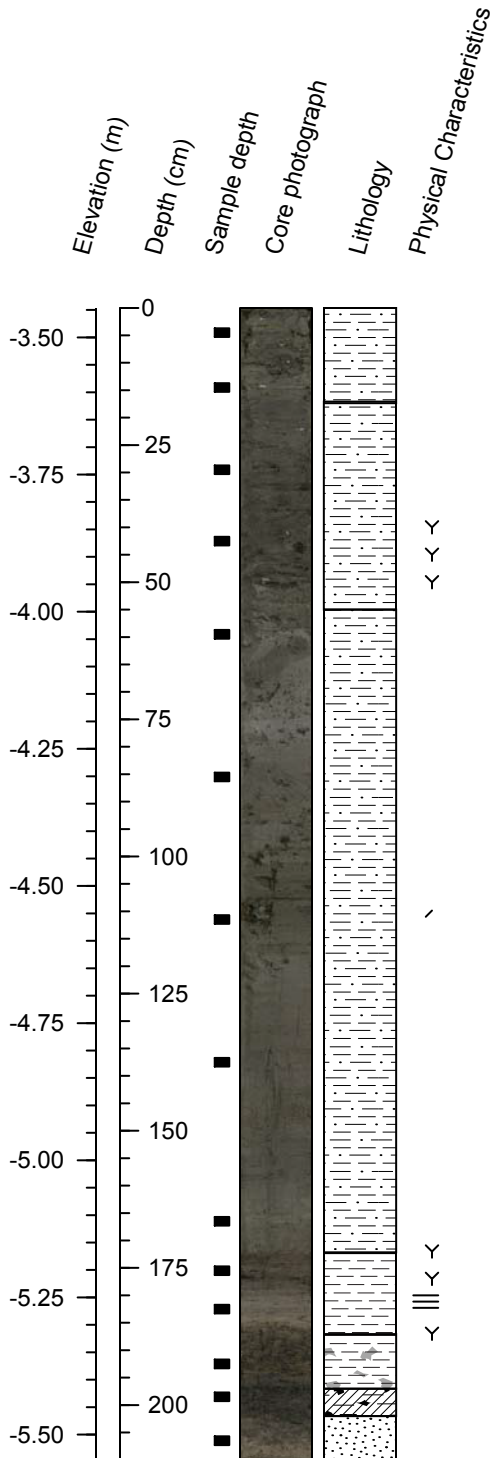
49 - 76 cm: MUDDY SAND, mottled gray (2.5 Y 4/1) to grayish-brown (2.5 Y 5/2) to brown (10 YR 4/3) muddy sand with abundant small pebbles

76 - 126 cm: SAND, massive, clean, light brownish-gray (10 YR 6/2) to light gray (10 YR 7/2) sand, with scattered shell fragments and sharp basal contact

126 - 138 cm: CLAY, massive, clean, gray (Gley 1 5/N) clay

Core ID: SPCMSC-08



Core ID: SPCMSC-08**Latitude:** 39.82818 N **Elevation:** -3.45 m**Longitude:** 74.13942 W **Core Length:** 210 cm**Location:** Barnegat Bay - W Mouth Forked River**Lithologic Description**

0 - 17 cm: MUD, mottled very dark gray (Gley 1 3/N) silty mud, with moderate disseminated shell fragments and occasional small organic flecks

17 - 55 cm: MUD, mottled, black (Gley N 2.5/N), organic-poor silty mud, with silty lenses and scattered shell fragments

55 - 172 cm: SILTY CLAY, dark gray (10 YR 4/1) silty clay, with lenses of soft, clean clay, abundant disseminated organic fragments, occasional woody fragments, and a large woody clast at 111 cm; organic content decreases down-core

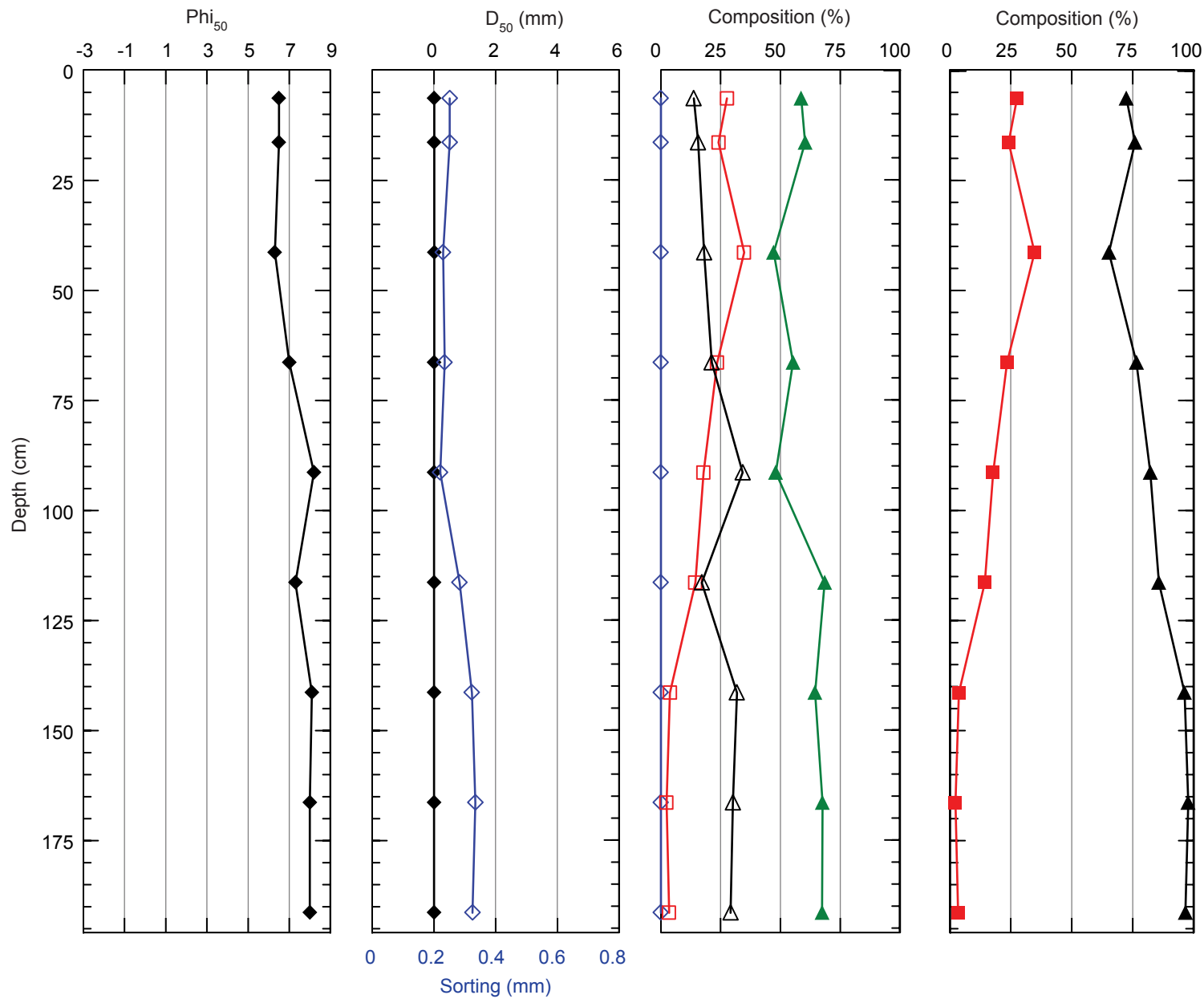
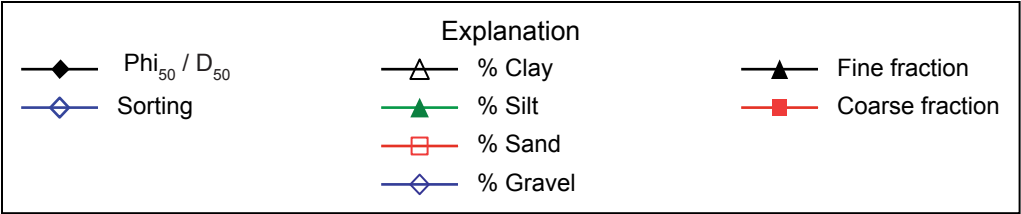
172 - 187 cm: CLAY, faintly laminated dark gray (2.5 Y 4/1) clay interbedded with dark grayish-brown (2.5 Y 4/2) organic-rich clay

187 - 197 cm: ORGANIC-RICH CLAY, very dark brown (10 YR 2/2) organic-rich clay, with abundant very dark brown to black peaty clasts and a thin, orangish organic horizon from 93-94 cm; organic content increases down-core

197 - 202 cm: PEAT, black (10 YR 2/1) hemic peat

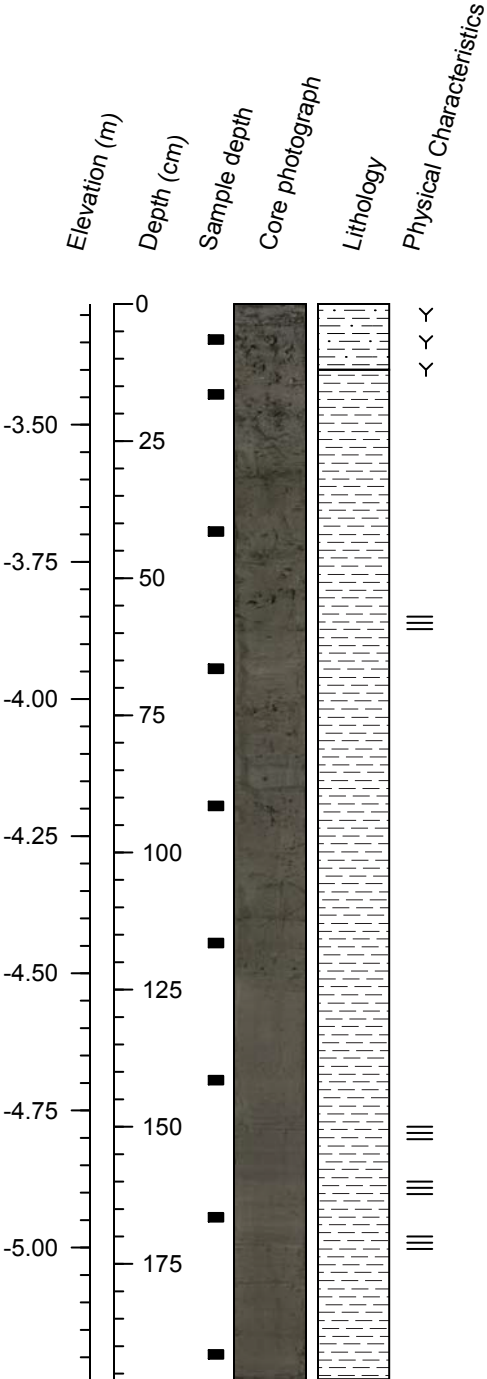
202 - 210 cm: SAND, gray (5 Y 5/1), well sorted, medium-grained sand with dark gray organic sand lenses at upper contact

Core ID: SPCMSC-09



Core ID: SPCMSC-09

Latitude: 39.83888 N Elevation: -3.28 m
Longitude: 74.11695 W Core Length: 196 cm
Location: Barnegat Bay - W Island Beach State Park

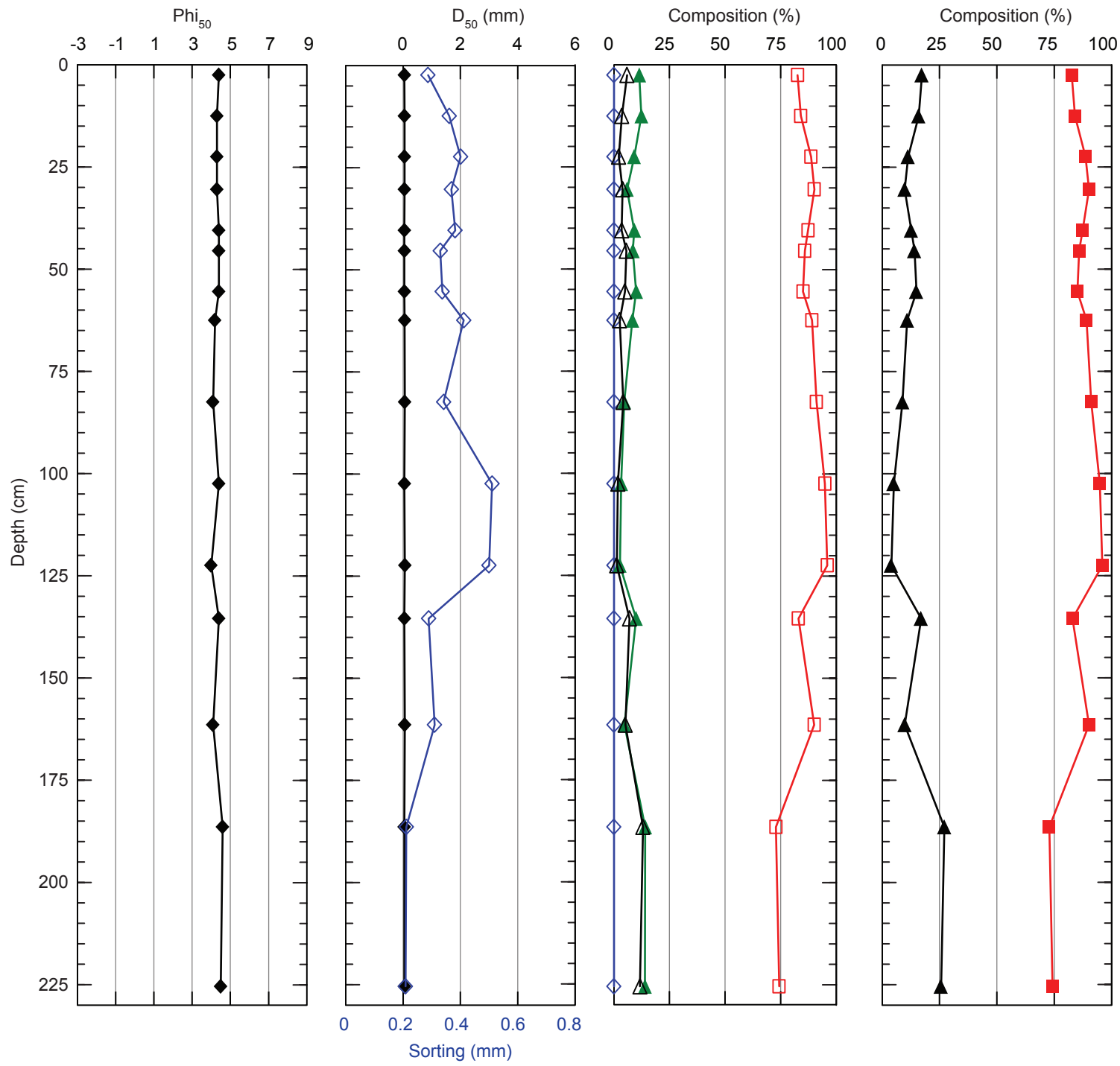
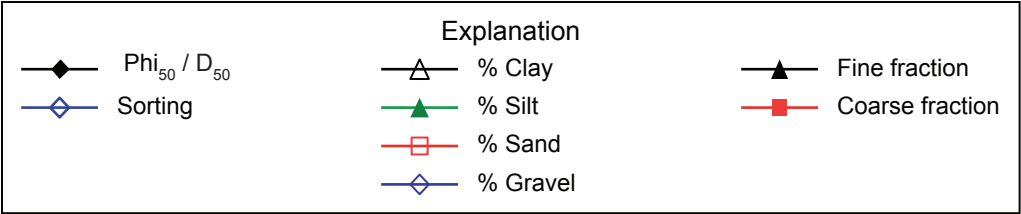


Lithologic Description

0 - 12 cm: MUD, black (Gley 1 2.5/N), organic-poor silty mud

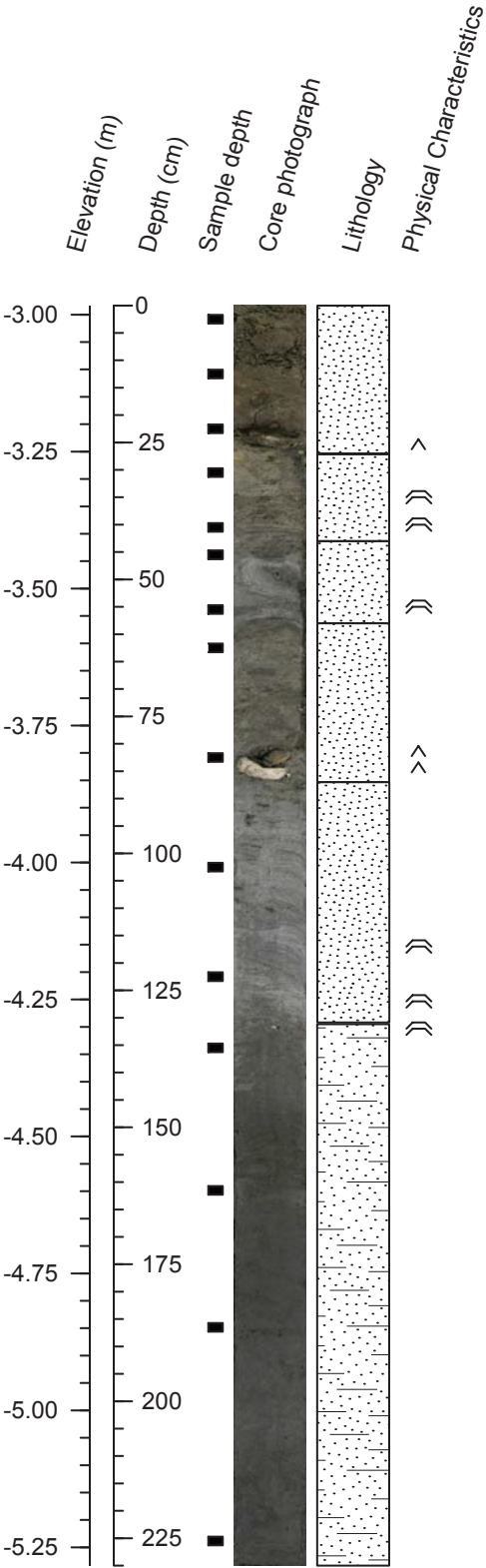
12 - 19 cm: CLAY, faintly laminated dark gray (Gley 1 4/N) clay, with thin silty lenses and horizons and scattered shell fragments; silt content increases down-core

Core ID: SPCMSC-10



Core ID: SPCMSC-10

Latitude: 39.82233 N Elevation: -2.98 m
Longitude: 74.12137 W Core Length: 230 cm
Location: Barnegat Bay - W Island Beach State Park



Lithologic Description

0 - 27 cm: SAND, grayish-brown (2.5 Y 5/2), well sorted, very fine-grained muddy sand, with occasional dark brown sandy mud clasts and a large, intact articulated clam shell and concentrated shell fragments at the basal contact

27 - 43 cm: SAND, olive-gray (5 Y 5/2), well-sorted, fine-grained sand, with thin, deformed, muddy sand laminations, occasional small brown mud clasts, and moderate disseminated mica flecks; muddy laminations become more common down-core

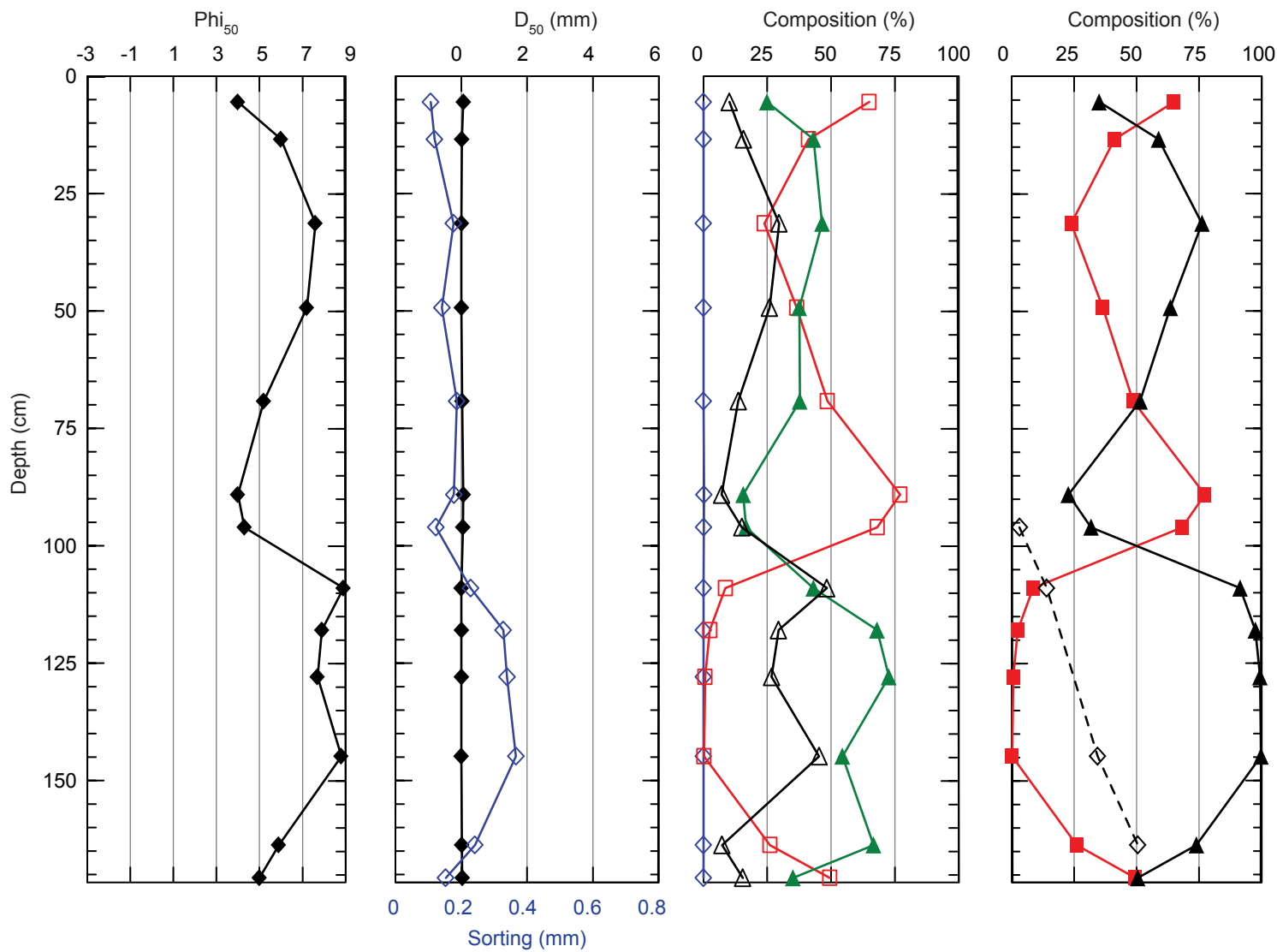
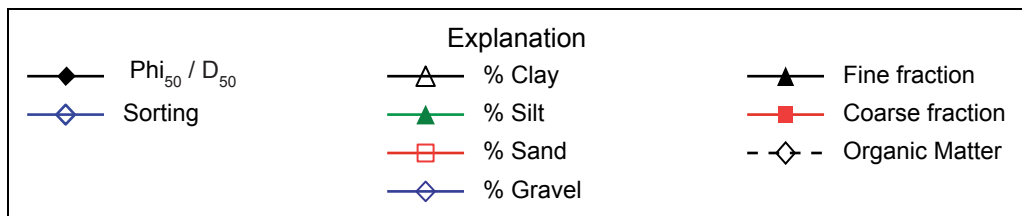
43 - 58 cm: SAND, light gray (Gley 1 7/N), well sorted, very fine-grained clean sand, with thin, deformed, muddy sand laminations and scattered mica flecks

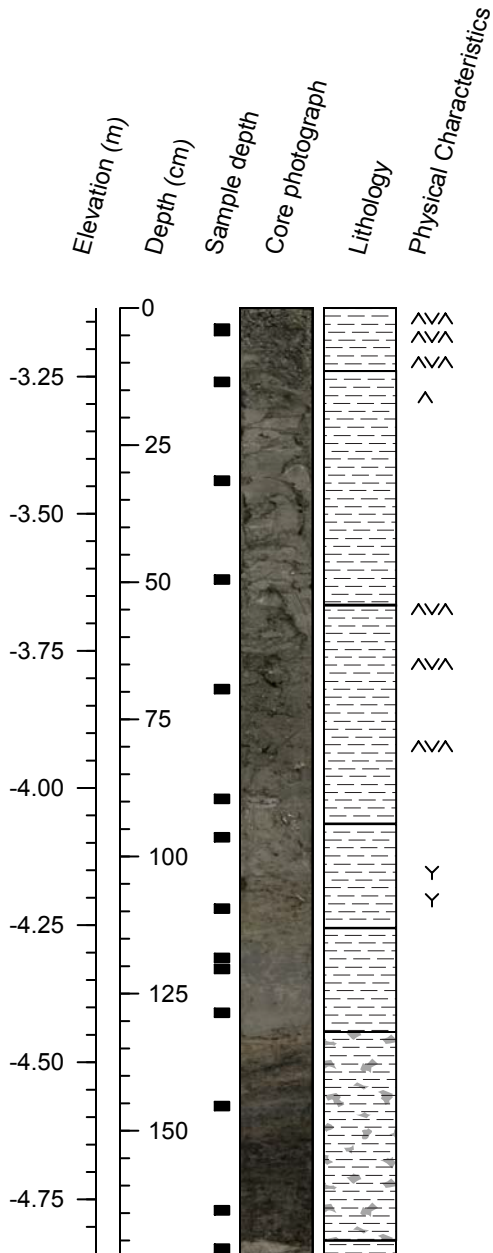
58 - 87 cm: SAND, olive-gray (5 Y 5/2), well sorted, fine-grained sand, with thin muddy sand horizons, occasional muddy sand clasts, scattered shell fragments, and two large, articulated clam shells at the basal contact

87 - 131 cm: SAND, light gray (Gley 1 7/N), well sorted, very fine-grained sand, with thin, deformed, muddy sand horizons, occasional muddy sand clasts, and scattered mica flecks and shell fragments

131 - 230 cm: MUDDY SAND, mostly massive, mottled, dark gray (Gley 1 4/N), very fine-grained muddy sand, with silty horizons and scattered mica flecks and very small shell fragments

Core ID: SPCMSC-11



Core ID: SPCMSC-11**Latitude:** 39.82037 N**Elevation:** -3.12 m**Longitude:** 74.13639 W**Core Length:** 172.5 cm**Location:** Barnegat Bay - W Mouth Forked River**Lithologic Description**

0 - 11.5 cm: SHELL HASH, shell hash in very dark gray (Gley 1 3/N) muddy matrix

11.5 - 54 cm: MUD, massive, gray to very dark gray (Gley 4/1), soft mud with large inarticulated oyster shell halves

54 - 94 cm: MUD, gray to very dark gray (Gley 4/1) bioturbated mud with abundant shell fragments; shell content decreases down-core

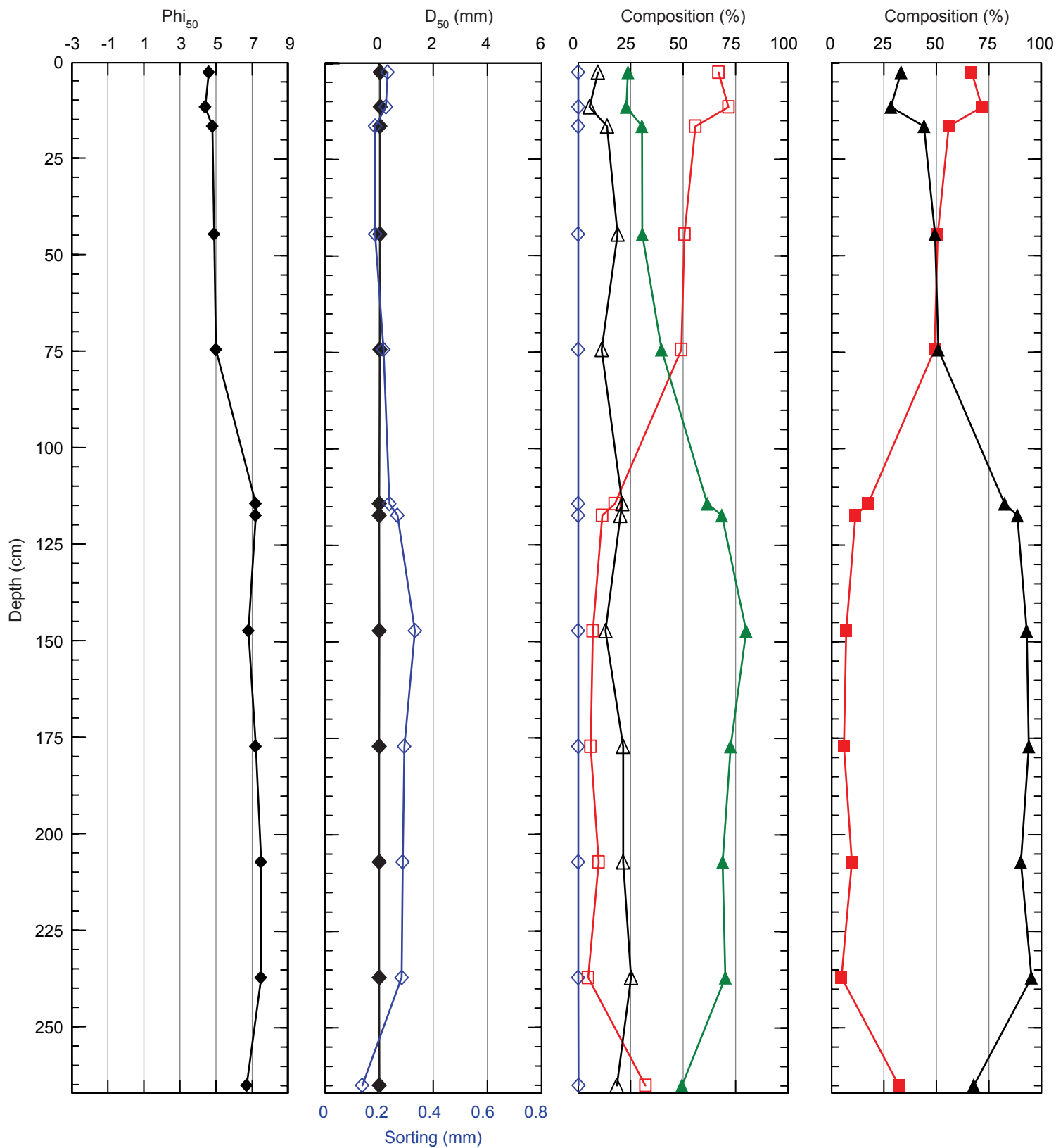
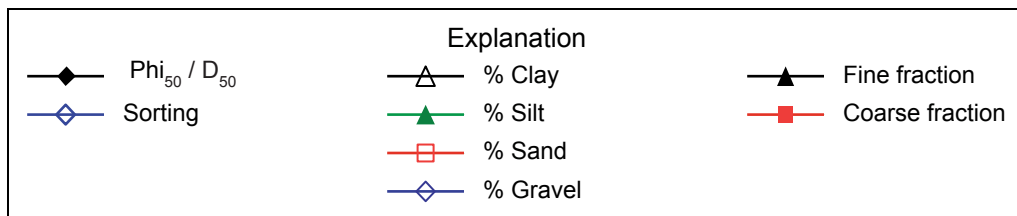
94 - 113 cm: MUD, mottled gray (Gley 1 4/N) clay and dark gray (2.5 Y 4/1) organic-rich mud, with abundant brown organic fragments and minimal scattered shell fragments; clay content increases down-core

113 - 132 cm: CLAY, mottled, very dark gray (Gley 1 3/N) and gray (2.5 Y 5/1), dense, clean clay

132 - 170 cm: ORGANIC-RICH MUD, inter-bedded very dark grayish-brown (2.5 Y 3/2) to very dark gray, (10 YR 3/1) organic-rich mud, with black (7.5 YR 2.5/1) hemic peat horizons, abundant degraded root fibers, and sharp basal contact

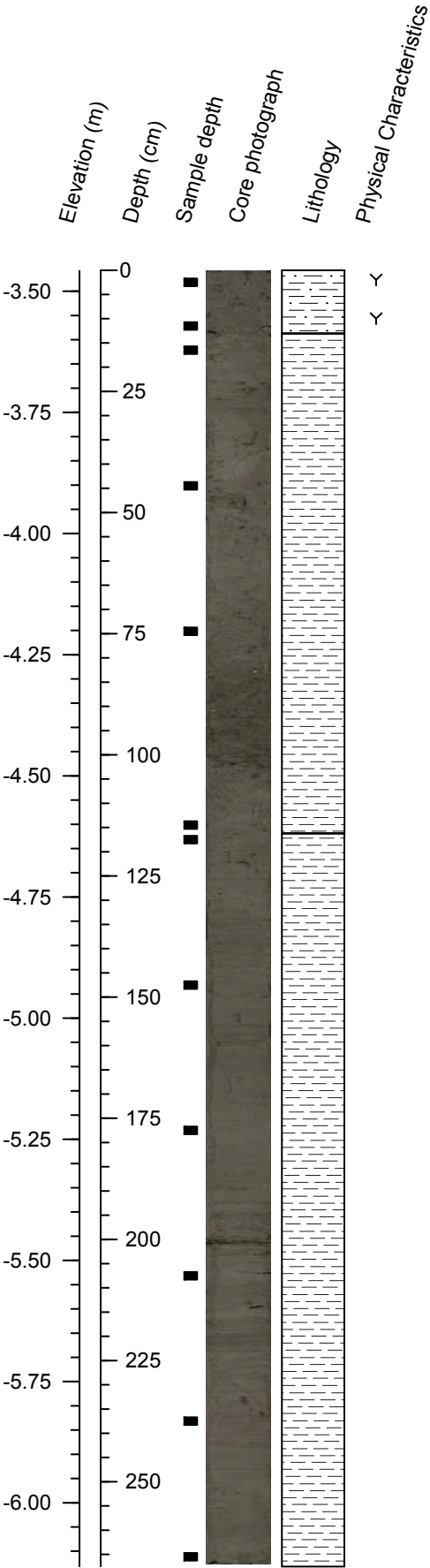
170 - 172.5 cm: CLAY, very dark gray (Gley 1 3/N), dense clay

Core ID: SPCMSC-12



Core ID: SPCMSC-12

Latitude: 39.80324 N Elevation: -3.46 m
Longitude: 74.15610 W Core Length: 267.5 cm
Location: Barnegat Bay - NW Barnegat Inlet



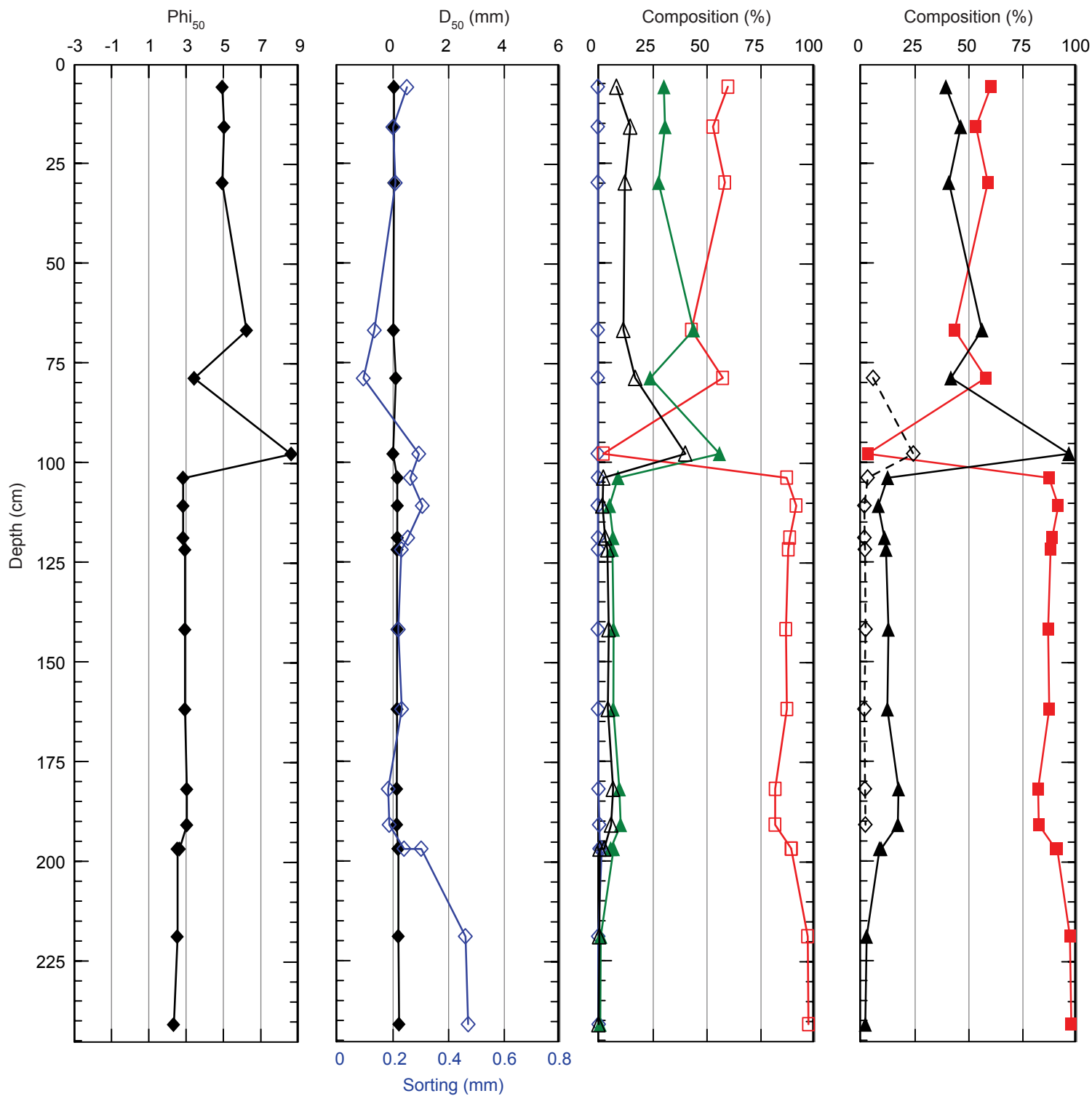
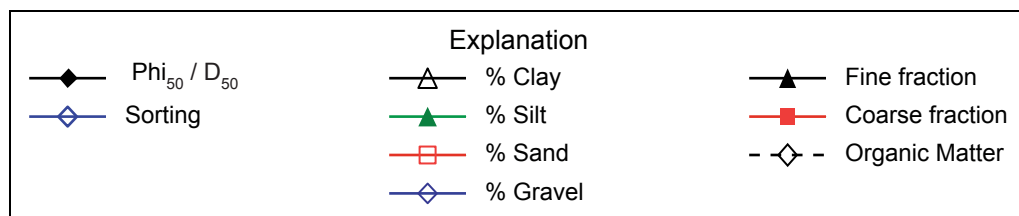
Lithologic Description

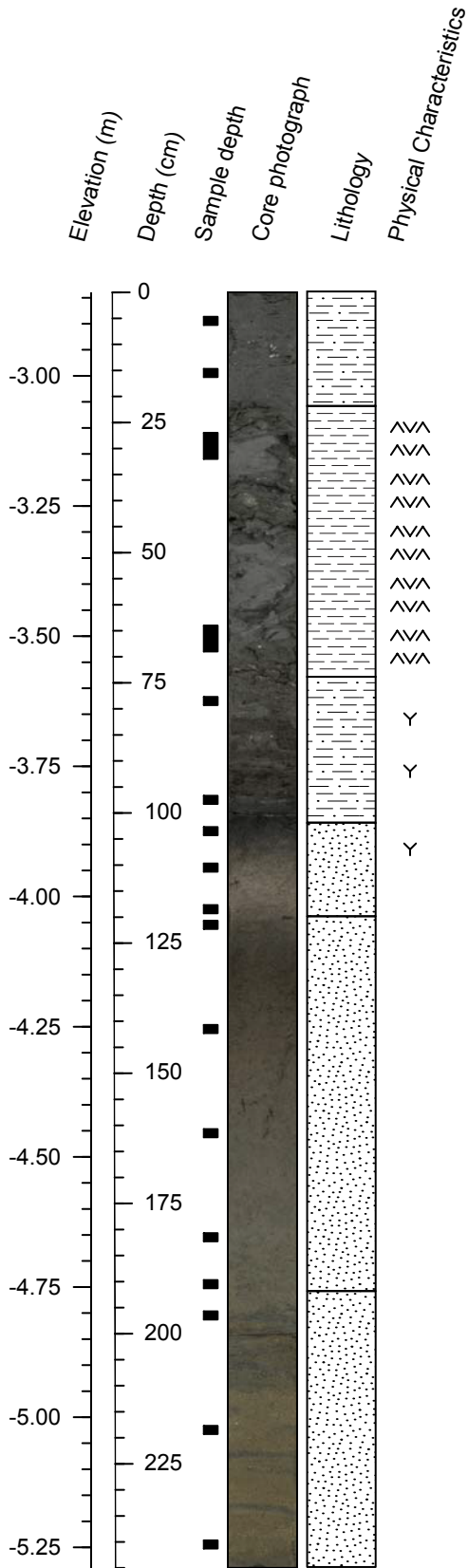
0 - 13 cm: MUD, very dark gray-black (Gley 1 2.5/N) organic-rich sandy mud, with very small, degraded organic fragments

13 - 116 cm: MUD, mottled, very dark greenish-gray (Gley 1 3/1) silty clay and clay with scattered shell fragments

116 - 267.5 cm: CLAY, very dark greenish-gray (Gley 1 3/1) clay with thin silty clay interbeds; with scattered shell fragments and occasional small, woody, organic fragments

Core ID: SPCMSC-13



Core ID: SPCMSC-13**Latitude:** 39.75943 N**Elevation:** -2.84 m**Longitude:** 74.17681 W**Core Length:** 245 cm**Location:** Barnegat Bay - WSW Barnegat Inlet**Lithologic Description**

0 - 22 cm: SILTY CLAY, mottled, very dark gray (Gley 1 3/1) silty clay, with moderate disseminated shell fragments and very small mica flecks

22 - 74 cm: SHELLY CLAY, very dark gray (Gley 1 3/1) clay with abundant, intact articulated and fragmented oyster shells

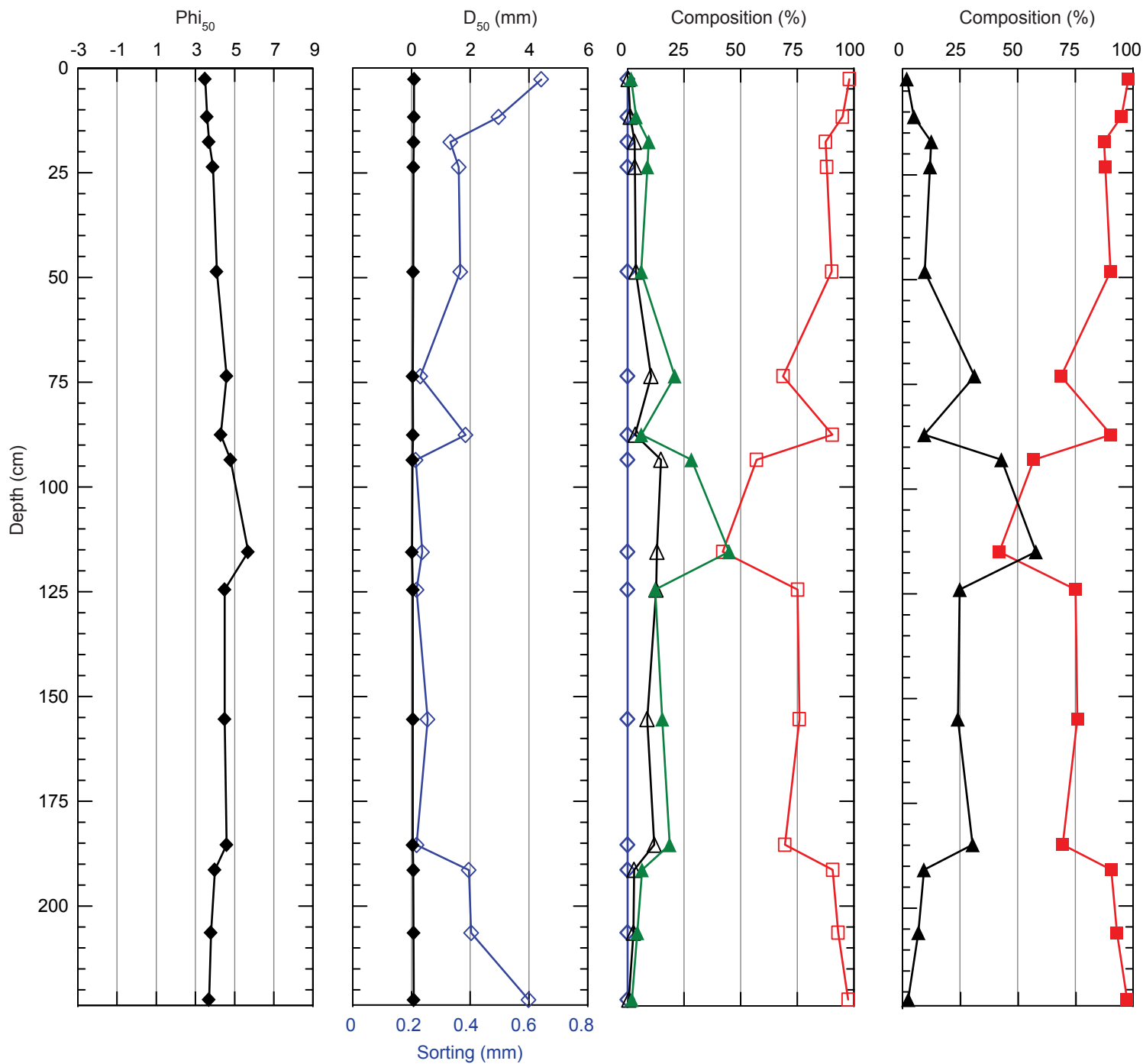
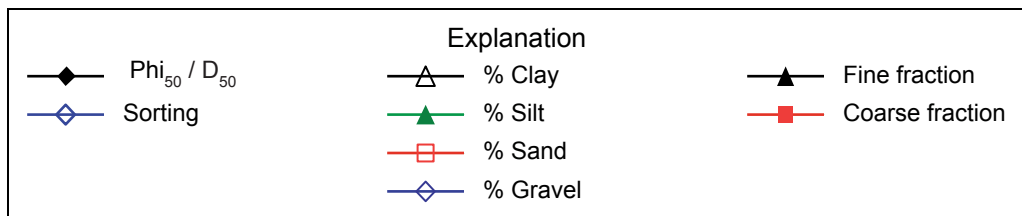
74 - 102 cm: SILTY CLAY and ORGANIC-RICH MUD, gray (Gley 1 5/1) silty clay interbedded with very dark brown-gray (7.5 YR 3/1), organic-rich mud; with abundant disseminated organic and woody fragments

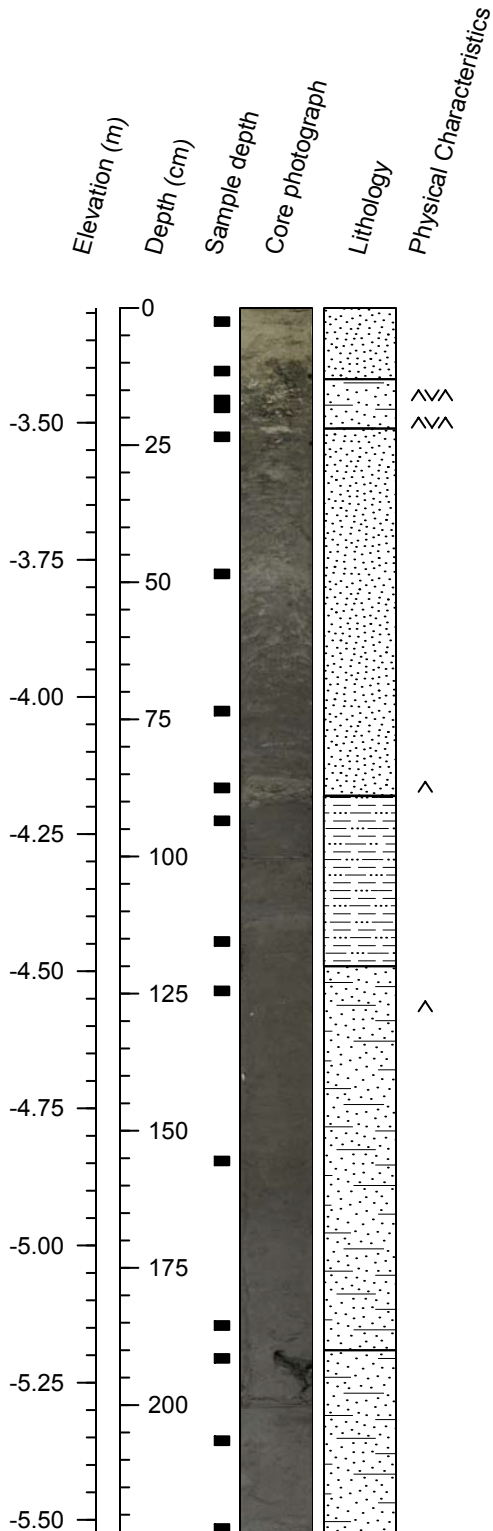
102 - 120 cm: SAND, very dark gray (Gley 1 3/1) organic-rich sand grades into clean, grayish-brown (10 YR 5/2), well-sorted, fine to medium-grained sand with occasional small, black, organic flecks

120 - 192 cm: SAND, very dark grayish-brown (10 YR 3/2) to grayish-brown (10 YR 5/2) sand, with disseminated organic fragments becoming less common down-core

192 - 245 cm: SAND, well-sorted, yellowish-brown (10 YR 5/4), fine-grained quartz sand with grayish-brown (2.5 Y 5/1) muddy sand interbeds; muddy interbeds are slightly deformed from coring; with occasional very coarse sand grains and disseminated shell fragments

Core ID: SPCMSC-14



Core ID: SPCMSC-14**Latitude:** 39.82215 N**Elevation:** -3.29 m**Longitude:** 74.11627 W**Core Length:** 224 cm**Location:** Barnegat Bay - W Island Beach State Park**Lithologic Description**

0 - 13 cm: SAND, clean, well-sorted, light brownish-gray (10 YR 6/2), very-fine to fine-grained sand with small, dark gray (10 YR 4/1) silty lenses

13 - 22 cm: SHELL LAG, mottled grayish-brown (10 YR 5/2) muddy sand with abundant shell fragments

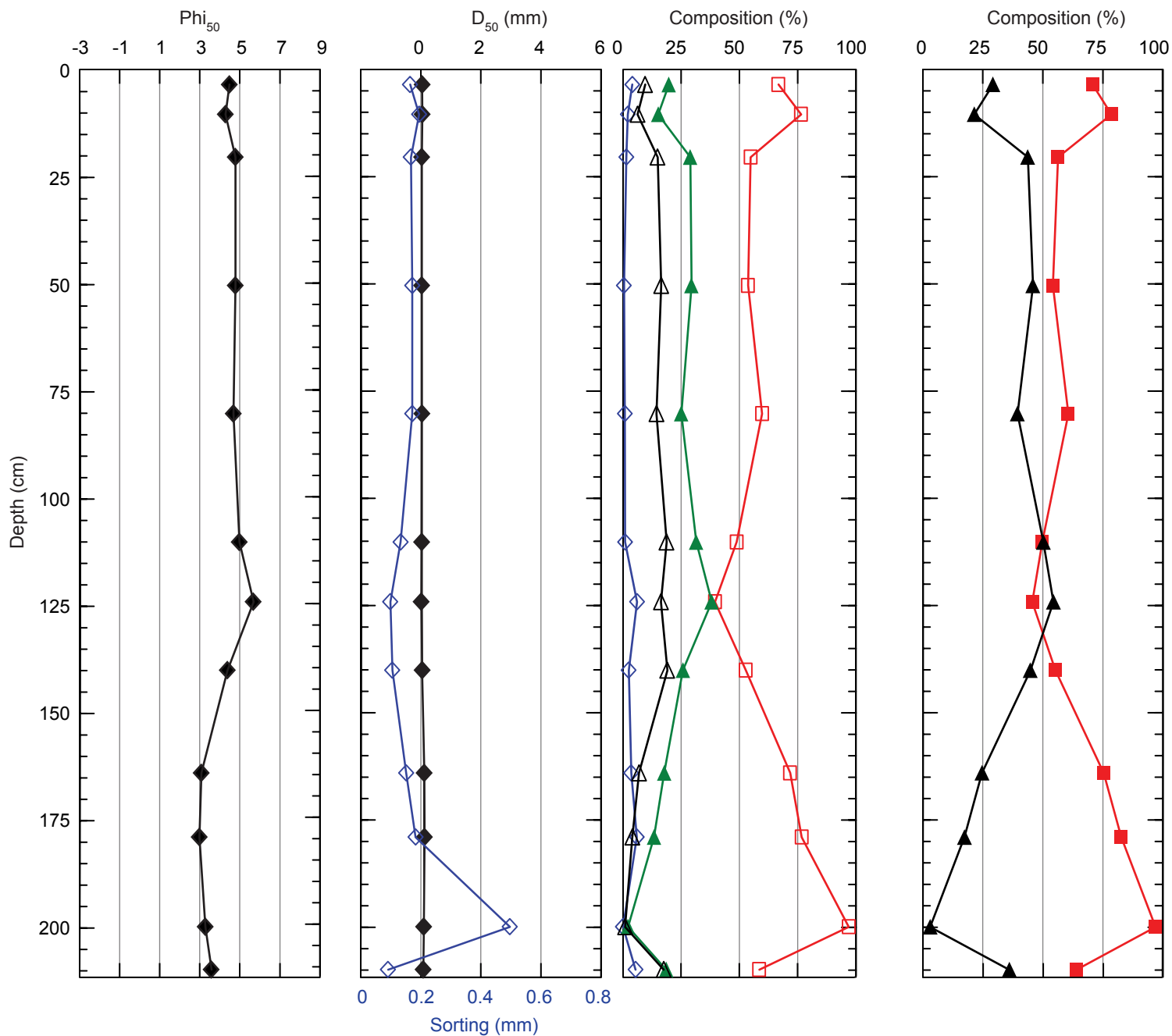
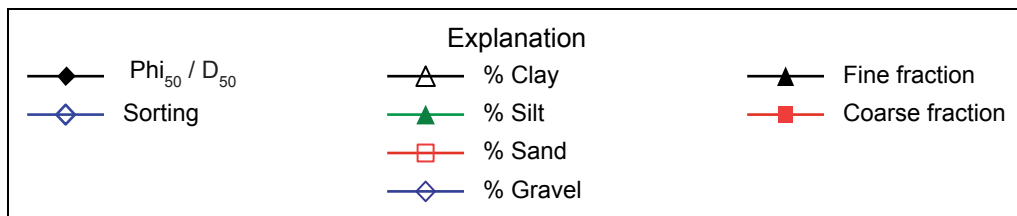
22 - 89 cm: SAND and MUDDY SAND, light gray (10 YR 7/1) sand with grayish-brown (10 YR 5/6) muddy sand lenses; mud content increases down-core; with disseminated mica flecks and large bivalve fragments in a sandy lens at 87 cm

89 - 120 cm: MUD, interbedded very dark greenish-gray (Gley 1 3/1) mud and silty mud, with abundant small mica flecks concentrated in the silty horizons

120 - 190 cm: MUD and SAND, dark olive-gray (5 Y 3/2) silty mud grades down-core into muddy, very fine-grained sand, with abundant mica flecks and scattered shell fragments

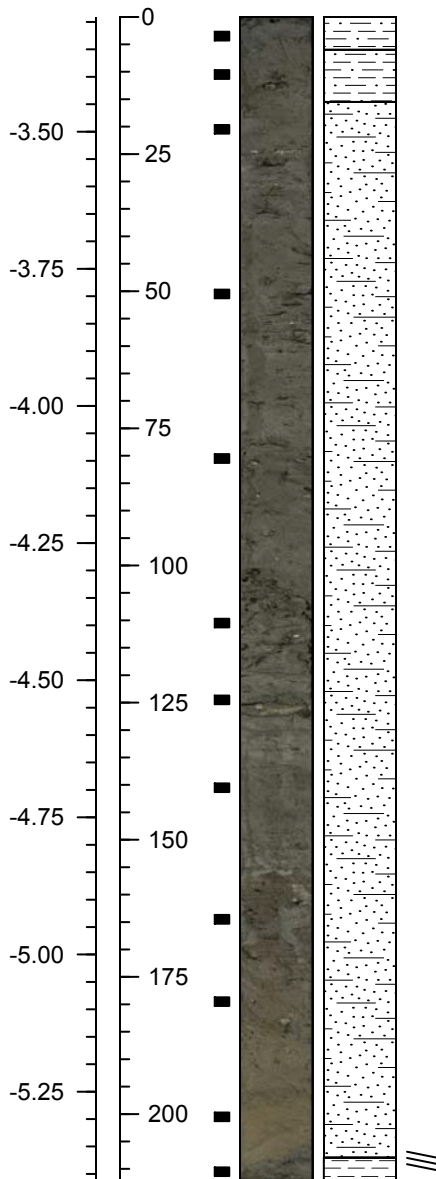
190 - 224 cm: MUDDY SAND, dark olive-gray (5 Y 3/2) muddy sand with abundant disseminated mica flecks and occasional small silty lenses

Core ID: SPCMSC-15



Core ID: SPCMSC-15**Latitude:** 39.79904 N**Elevation:** -3.29 m**Longitude:** 74.16213 W**Core Length:** 212 cm**Location:** Barnegat Bay - NW Barnegat Inlet

Elevation (m)
Depth (cm)
Sample depth
Core photograph
Lithology
Physical Characteristics

Lithologic Description

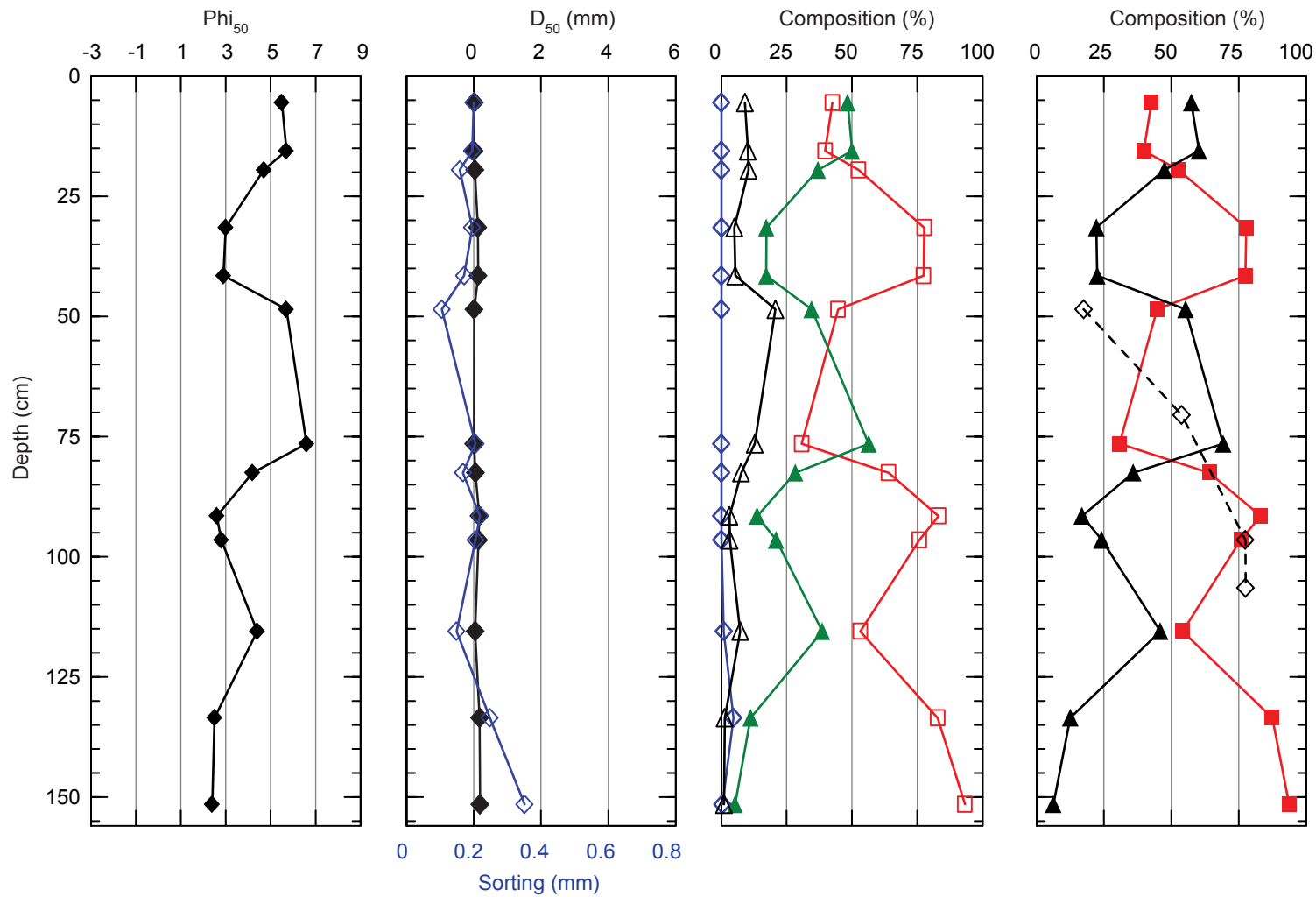
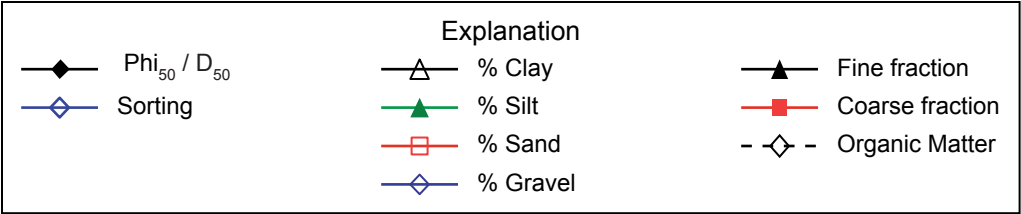
0 - 6 cm: SILTY MUD, massive, black (5 Y 2.5/1), soft silty mud

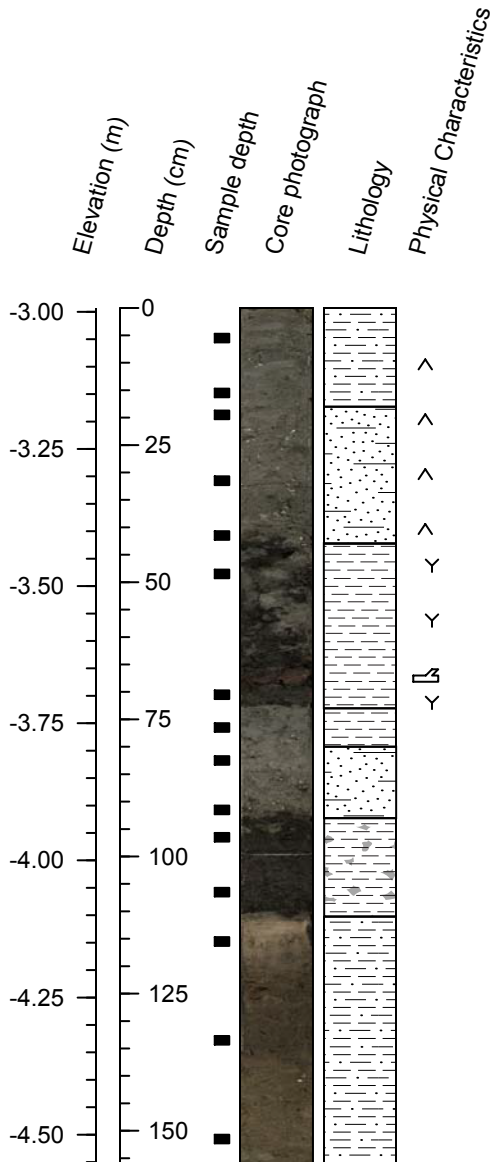
6 - 15.5 cm: SILTY MUD, very dark gray (2.5 Y 3/1) bioturbated silty mud, with scattered shell fragments and occasional large pebbles; shell content decreases down-core

15.5 - 208 cm: MUDDY SAND, very dark grayish-brown (2.5 Y 3/2) grading down-core to olive-brown (2.5 Y 4.4) muddy sand, with small and large pebbles, gray silty clay lenses, and sharp, angular basal contact; clay content decreases down-core

208 - 212 cm: CLAY, massive dark gray (2.5 Y 3/1) clay, with olive-brown sandy lenses and small pebbles

Core ID: SPCMSC-16



Core ID: SPCMSC-16**Latitude:** 39.86147 N **Elevation:** -2.99 m**Longitude:** 74.12046 W **Core Length:** 156 cm**Location:** Barnegat Bay - W Island Beach State Park**Lithologic Description**

0 - 18 cm: SILTY MUD, very dark gray (Gley 1 3/N) silty mud with abundant disseminated shell fragments

18 - 43 cm: MUDDY SAND, mottled, very dark gray (5 Y 3/1) muddy sand, with abundant disseminated shell fragments

43 - 73 cm: MUD, soft, very dark gray (5 Y 3/1) mud and very dark brown (10 YR 2/2) organic-rich mud with abundant large organic and woody fragments and very sharp basal contact

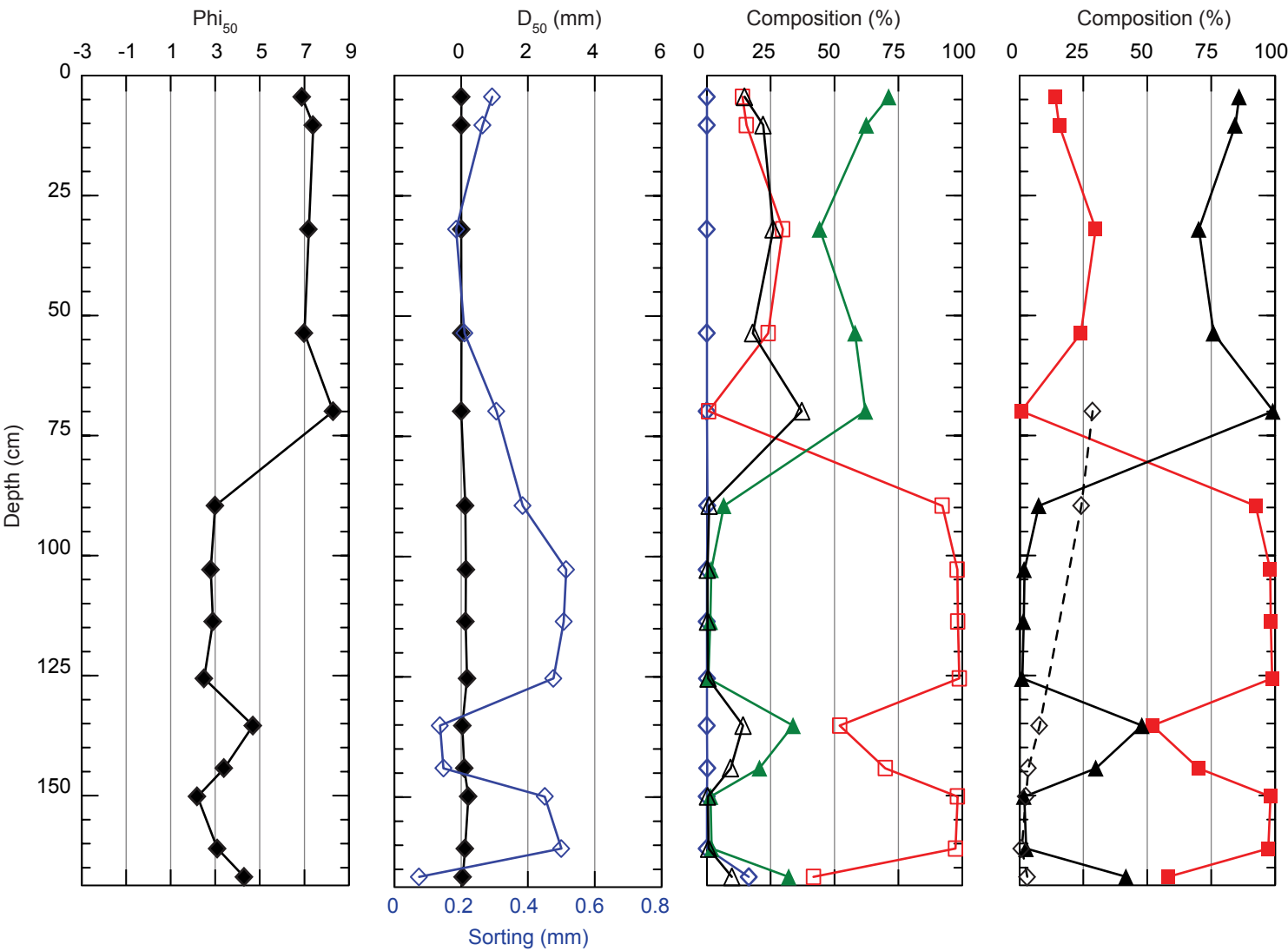
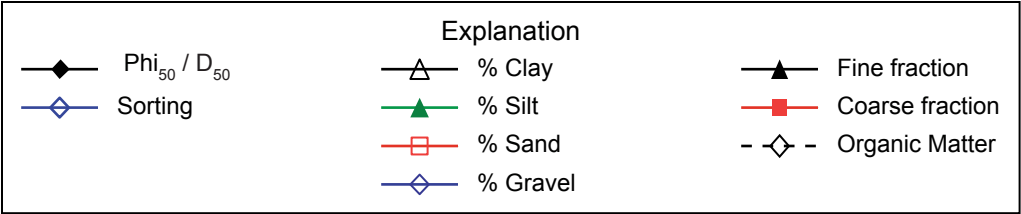
73 - 80 cm: MUD, soft, massive, very dark gray (Gley 1 3/N) mud with scattered shell fragments

80 - 93 cm: MUDDY SAND, very dark gray (Gley 1 3/N), muddy fine-grained sand with moderate disseminated shell fragments; sand content increases down-core

93 - 111 cm: ORGANIC-RICH MUD, dark brownish-black (5 YR 2/1) organic-rich mud with disseminated small organic and woody fragments and sharp contacts

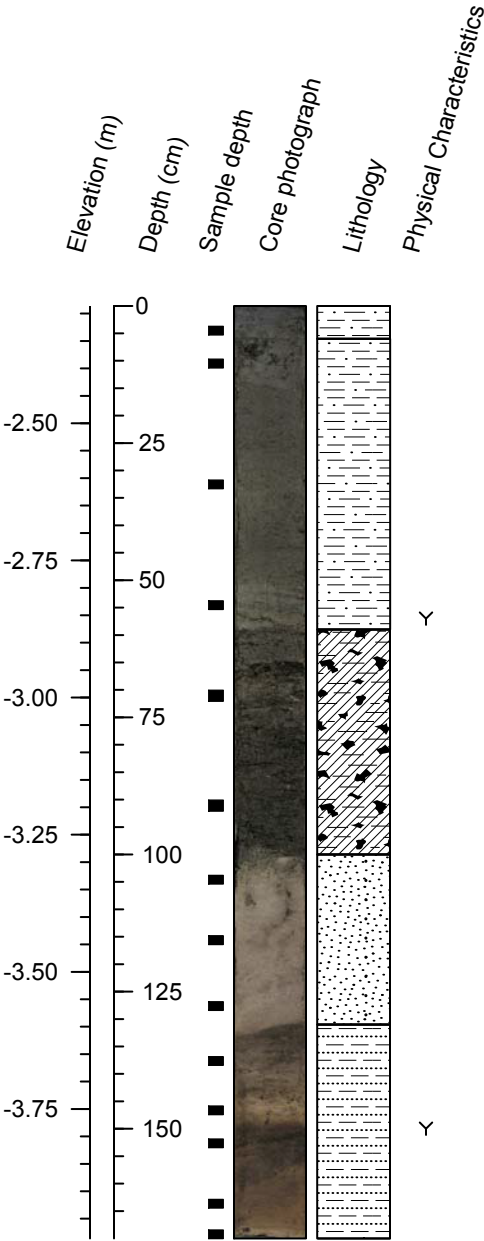
111 - 156 cm: SILTY MUD and MUDDY SAND, dark olive-brown (2.5 Y 3/3) silty mud grades into muddy sand, with occasional woody fragment sand small pebbles; mud content decreases down-core

Core ID: SPCMSC-18



Core ID: SPCMSC-18

Latitude: 39.94516 N Elevation: -2.29 m
Longitude: 74.11333 W Core Length: 170 cm
Location: Barnegat Bay - Mouth Toms River



Lithologic Description

0 - 6 cm: SILTY MUD, massive, black (2.5 Y 2.5/1), soft silty mud

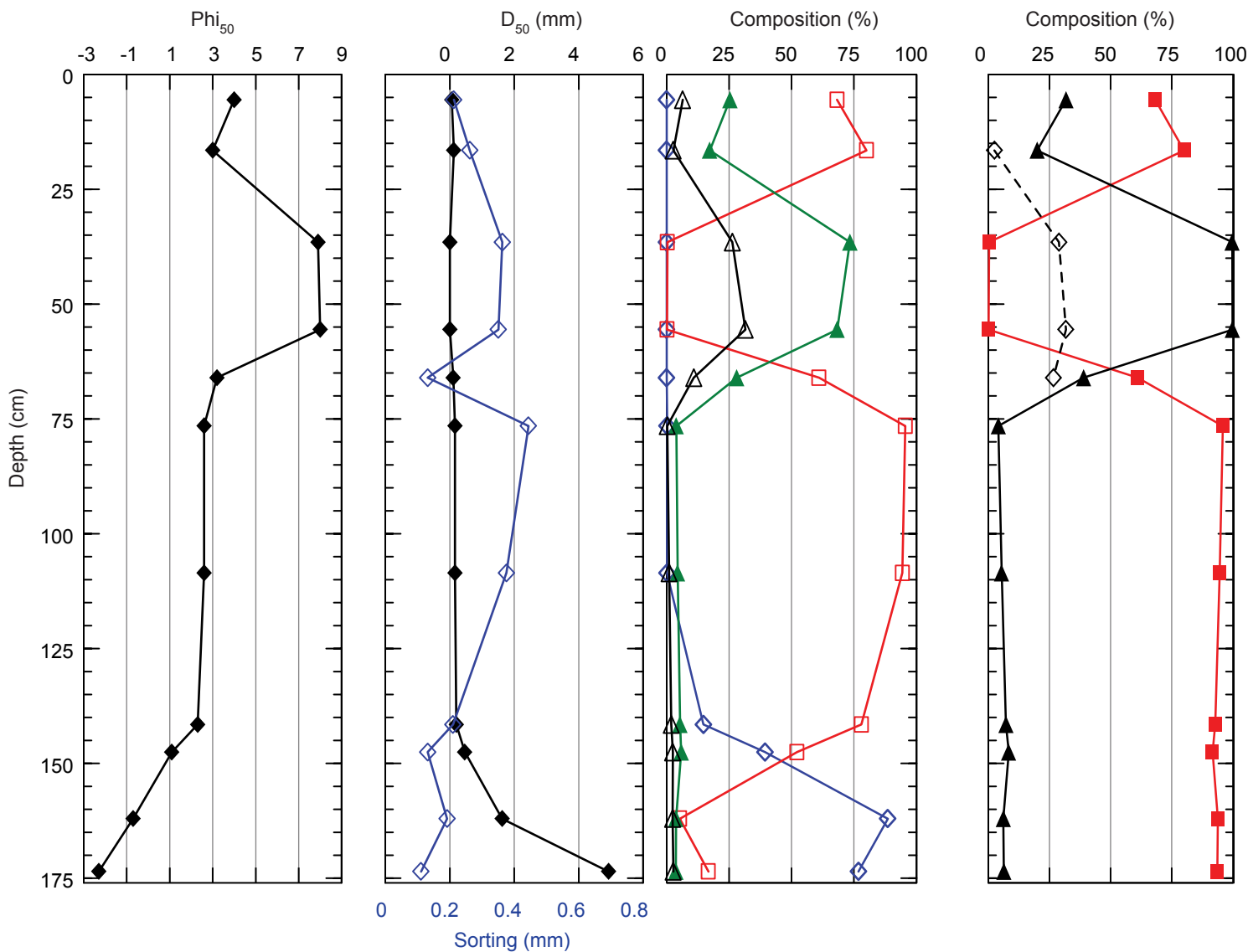
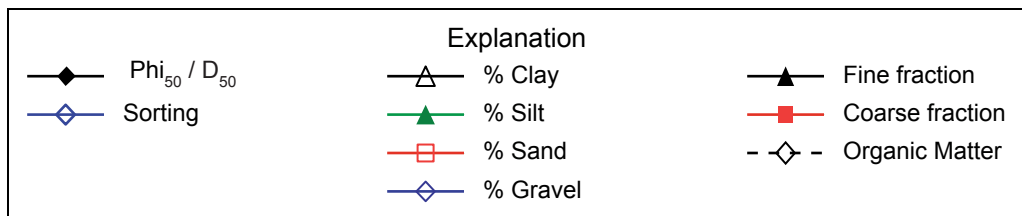
6 - 59 cm: SILTY MUD, massive, very dark brown (2.5 Y 2.5/1) to black (2.5 Y 3/1) silty mud, with organic-rich clasts and lenses near the basal contact

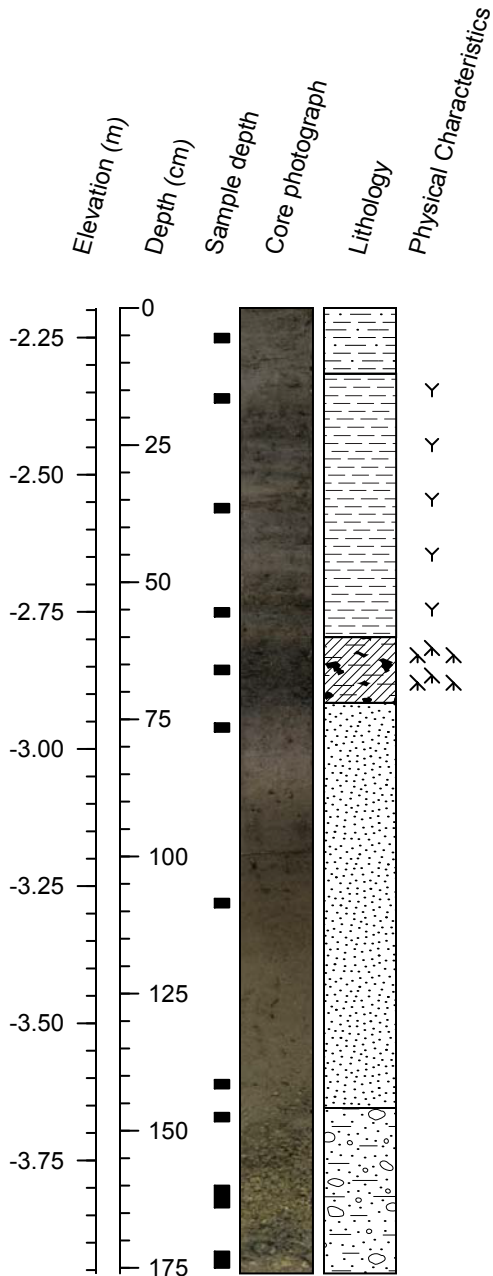
59 - 100 cm: PEAT, dark brown (10 YR 5/1 to 10 Y 2/2) hemic peat, with abundant root and organic fragments and sharp basal contact

100 - 131 cm: SAND, massive, gray (10 YR 6/1), well sorted, medium-grained sand, with black root casts and organic clasts and sharp basal contact

131 - 170 cm: SAND and MUD, interbedded very dark brown (10 YR 2/2), dark gray (7.5 YR 3/2), and brown (7.5 YR 5/2) organic-rich sand and sandy mud, with small fibrous root fragments, root casts, and organic clasts, scattered shell fragments, and small pebbles

Core ID: SPCMSC-20



Core ID: SPCMSC-20**Latitude:** 40.00465 N **Elevation:** -2.20 m**Longitude:** 74.09852 W **Core Length:** 176 cm**Location:** Barnegat Bay-E Silverton**Lithologic Description**

0 - 12 cm: SILTY MUD, soft, massive, very dark gray (10 YR 3/1) silty mud with a few scattered mica flecks

12 - 60 cm: CLAY and ORGANIC-RICH MUD, interbedded very dark greenish-gray (Gley 1 3/2) clay and dark olive-brown (2.5 Y 3/3) organic-rich mud, with abundant small degraded organic fragments

60 - 72 cm: PEAT, hemic root mat with abundant small root fragments in a black (2.5 Y 2.5/1) muddy matrix

72 - 146 cm: SAND, massive, gray (2.5 Y 5/1) to dark grayish-brown (2.5 Y 4/2) and light brownish-gray (2.5 Y 6/2), fine-grained sand and muddy sand, with occasional coarse-grained sand grains

146 - 176 cm: PEBBLES, fining-upward unit consisting of pebbles in a brown to gray muddy matrix