|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sampling Dates/Cruise#** |  |  | |  |  |
| **Wasting Disease** Urchins:  Stars: |  |  | |  |  |
| **Black Spot Disease** |  |  | |  |  |
| **Lead Line Condition:** |  |  | |  |  |
| **Percent Canopy Cover of**  ***Macrocystis pyrifera*** |  |  | |  |  |
| **Site Status** |  |  | |  |  |
| **# Fishing Lures Found** | **# Fishing Weights Found** | | **Notes:** | | |
| New: Old: | New: Old: | |  | | |

**TEMPERATURE LOGGER:**

|  |  |  |
| --- | --- | --- |
| **Date Deployed** | **Date Retrieved** | **Notes:** |
|  |  | See Temp. logger and site history forms |

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Participants** | **Date Completed** | **Notes** |
| **1 m Quadrats** |  |  |  |
| **5 m Quadrats** |  |  |  |
| **RPCs** |  |  |  |
| **Band Transects** |  |  |  |
| **Visual Fish Transects** |  |  |  |
| **Roving Diver Fish Count** |  |  |  |
| **Fish Size Frequency** |  |  |  |
| **Site (Video) Documentation** |  |  |  |
| **Species List** |  |  |  |
| **ARMs** |  |  |  |
| **Non-KFM** |  |  |  |

**SIZE FREQUENCY MEASURMENTS:** *Tegula regina* (60) \_\_\_\_\_\_

*Macrocystis pyrifera* (100)

*Tethya aurantia* (60)

*Stylaster californica* (50)

*Lophogorgia chilensis* (60)

*Muricea fruticosa* (60)

*Muricea californica* (60)

*Megathura crenulata* (60)

*Haliotis rufescens* (60)

*Haliotis corrugata* (60)

*Haliotis fulgens* (60)

*Kelletia kelletii* (60)

*Crassadoma gigantea* (60)

*Megastraea undosa* (60)

*Lithopoma gibberosa* (60)

*Lytechinus anamesus* (200)

*Pycnopodia helianthoides* (60)

*S. franciscanus* (200)

*S. purpuratus* (200)

*Patiria miniata* (60)

*Pisaster giganteus* (60)

**Version 1.0 2018**

|  |  |  |
| --- | --- | --- |
| **ABUNDANCE RATINGS** |  |  |
| X = present (no rating given) |  |  |
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| 1 = rare, few organisms found |  |  |
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| **NOTES** |  |  |
| j = juvenile |  |  |
| s = shell only |  |  |
| #/j# = (e.g. 2/j3 - adult abundance 2, juvenile abundance 3) | | |

**Algae NOTES:**

**Chlorophyta**

*Codium* spp. *\_\_\_\_\_\_\_\_*

*Derbesia* sp. *\_\_\_\_\_\_\_\_*

*Ulva* spp.  *\_\_\_\_\_\_\_\_*

Other green algae *\_\_\_\_\_\_\_\_*

**Phaeophyta**

*Agarum fimbriatum \_\_\_\_\_\_\_\_*

*Colpomenia* sp. *\_\_\_\_\_\_\_\_*

*Cystoseira* sp. *\_\_\_\_\_\_\_\_*

*Desmarestia* sp. *\_\_\_\_\_\_\_\_*

*Dictyoneuropsis \_\_\_\_\_\_\_\_*

*Dictyota/Pachydictyon\_\_\_\_\_\_\_*

*Dictyopteris* sp. *\_\_\_\_\_\_\_\_*

*Eisenia arborea \_\_\_\_\_\_\_\_*

*Laminaria farlowii \_\_\_\_\_\_\_\_*

*Macrocystis pyrifera \_\_\_\_\_\_\_\_*

*Pterygophora californica\_\_\_\_\_*

*Sargassum muticum \_\_\_\_\_\_\_\_*

*Sargassum horneri* *\_\_\_\_\_\_\_\_*

*Zonaria* sp. *\_\_\_\_\_\_\_\_*

Other brown algae *\_\_\_\_\_\_\_\_*

**Rhodophyta**

*Callophyllis* sp. *\_\_\_\_\_\_\_\_*

*Cryptopleura* spp. *\_\_\_\_\_\_\_\_*

*Gelidium* spp*. \_\_\_\_\_\_\_\_*

*Gigartina* spp*.* *\_\_\_\_\_\_\_\_*

*Laurencia* sp. *\_\_\_\_\_\_\_\_*

*Plocamium* sp. *\_\_\_\_\_\_\_\_*

*Rhodymenia* spp. *\_\_\_\_\_\_\_\_*

Articulated coralline \_*\_\_\_\_\_\_\_*

Encrusting coralline *\_\_\_\_\_\_\_\_*

Other red algae *\_\_\_\_\_\_\_\_*

Misc. plant *\_\_\_\_\_\_\_\_*

Bare rock \_\_\_\_\_\_\_\_

**Version 1.0 2018**

**Misc invert/CNId/SPONGE/Tun**

**PORIFERA NOTES:**Most common misc. invert:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*Haliclona* sp*. \_\_\_\_\_\_*

*Hymenamphiastra cyanocrypta\_\_\_\_*

*Polymastia* spp. *\_\_\_\_\_\_*

*Tethya aurantia \_\_\_\_\_\_*

Other Sponges *\_\_\_\_\_\_*

**ANTHOZOA**

*Anthopleura* spp. *\_\_\_\_\_\_*

*Astrangia lajollaensis \_\_\_\_\_\_*

*Balanophyllia* *elegans \_\_\_\_\_\_*

*Corynactis californica \_\_\_\_\_\_*

*Eugorgia rubens \_\_\_\_\_\_*

*Lophogorgia chilensis \_\_\_\_\_\_*

*Metridium* spp. *\_\_\_\_\_\_*

*Muricea californica \_\_\_\_\_\_*

*Muricea fruticosa \_\_\_\_\_\_*

*Sagartia/Cactosoma* spp. *\_\_\_\_\_\_*

*Urticina lofotensis \_\_\_\_\_\_*

*Urticina* spp. *\_\_\_\_\_\_*

**Hydrozoa**

Hydroid spp. *\_\_\_\_\_\_*

*Stylaster californicus \_\_\_\_\_\_*

**Annelida/Polychaeta**

*Chaetopterus* sp. *\_\_\_\_\_\_*

*Diopatra ornata \_\_\_\_\_\_*

*Dodecaceria* spp *\_\_\_\_\_\_*

*Phragmatopoma californica \_\_\_\_\_\_*

*Salmacina tribranchiata \_\_\_\_\_\_*

*Spirobranchus spinosus \_\_\_\_\_\_*

**Arthropoda/Crustacea**

*Balanus* sp. *\_\_\_\_\_\_*

*Cancer* sp. *\_\_\_\_\_\_*

*Panulirus interruptus \_\_\_\_\_\_*

**Bryozoa**

*Bugula* spp*. \_\_\_\_\_\_*

*Costazia costazii. \_\_\_\_\_\_*

*Watersipora* spp. *\_\_\_\_\_\_*

*Diaperoecia californica \_\_\_\_\_\_ Membranipora* spp. *\_\_\_\_\_\_*

Other Bryozoans *\_\_\_\_\_\_*

**Tunicates** *\_\_\_\_\_\_*

*Styela montereyensis \_\_\_\_\_\_*

**Misc. invertebrates** *\_\_\_\_\_\_*

**Molluscs** **NOTES:**

*Aplysia californica \_\_\_\_\_\_\_*

*Bursa californica* \_\_\_\_\_\_

*Crassadoma gigantea \_\_\_\_\_\_\_*

*Cryptochiton stelleri* \_\_\_\_\_\_

*Cypraea spadicea \_\_\_\_\_\_\_*

*Haliotis assimilis \_\_\_\_\_\_\_*

*Haliotis corrugata* \_\_\_\_\_\_

*Haliotis fulgens \_\_\_\_\_\_\_*

*Haliotis rufescens \_\_\_\_\_\_\_*

*Haliotis sorenseni* \_\_\_\_\_\_

*Kelletia kelletii \_\_\_\_\_\_\_*

*Lithopoma gibberosa \_*\_\_\_\_\_

*Megastraea undosa \_\_\_\_\_\_\_*

*Megathura crenulata* \_\_\_\_\_\_

*Octopus* spp. *\_\_\_\_\_\_\_*

*Serpulorbis squamigerus \_\_\_\_\_\_*

*Tegula regina \_\_\_\_\_\_\_*

**Version 1.0 2018**

**ECHINODERMS NOTES:**

*Centrostephanus coronatus \_\_\_\_\_\_*

*Cucumaria* sp. *\_\_\_\_\_\_*

*Dermasterias imbricata \_\_\_\_\_\_*

*Linckia* sp. *\_\_\_\_\_\_*

*Lytechinus anamesus \_\_\_\_\_\_*

*Ophiothrix spiculata \_\_\_\_\_\_*

*Pachythyone rubra \_\_\_\_\_\_*

*Parastichopus californicus \_\_\_\_\_\_*

*Parastichopus parvimensis \_\_\_\_\_\_*

*Patiria miniata \_\_\_\_\_\_*

*Pisaster giganteus \_\_\_\_\_\_*

*Pisaster ochraceus \_\_\_\_\_\_*

*Pycnopodia helianthoides \_\_\_\_\_\_*

*S. purpuratus**\_\_\_\_\_\_*

*S. franciscanus \_\_\_\_\_\_*

**Fish: NOTES:**

*Lythrypnus dalli \_\_\_\_\_\_*

*Coryphopterus nicholsii \_\_\_\_\_\_*

*Alloclinus holderi \_\_\_\_\_\_*

fish observed other than on rdfc or fish transects:

**Comments on ARMS:**

**Comments on Gear / Procedure / Transect/ Misc. obsevations:**

**Version 1.0 2018**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sampling Dates/Cruise#** |  |  | |  |  |
| **Wasting Disease** Urchins:  Stars: |  |  | |  |  |
| **Black Spot Disease** |  |  | |  |  |
| **Lead Line Condition:** |  |  | |  |  |
| **Percent Canopy Cover of**  ***Macrocystis pyrifera*** |  |  | |  |  |
| **Site Status** |  |  | |  |  |
| **# Fishing Lures Found** | **# Fishing Weights Found** | | **Notes:** | | |
| New: Old: | New: Old: | |  | | |

**TEMPERATURE LOGGER:**

|  |  |  |
| --- | --- | --- |
| **Date Deployed** | **Date Retrieved** | **Notes:** |
|  |  | See Temp. logger and site history forms |

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Participants** | **Date Completed** | **Notes** |
| **1 m Quadrats** |  |  |  |
| **5 m Quadrats** |  |  |  |
| **RPCs** |  |  |  |
| **Band Transects** |  |  |  |
| **Visual Fish Transects** |  |  |  |
| **Roving Diver Fish Count** |  |  |  |
| **Fish Size Frequency** |  |  |  |
| **Site (Video) Documentation** |  |  |  |
| **ARMS** |  |  |  |
| **Non-KFM** |  |  |  |
| **Species List** |  |  |  |

**SIZE FREQUENCY MEASURMENTS:** *Tegula regina* (60) \_\_\_\_\_\_

*Macrocystis pyrifera* (100)

*Tethya aurantia* (60)

*Stylaster californica* (50)

*Lophogorgia chilensis* (60)

*Muricea fruticosa* (60)

*Muricea californica* (60)

*Megathura crenulata* (60)

*Haliotis rufescens* (60)

*Haliotis corrugata* (60)

*Haliotis fulgens* (60)

*Kelletia kelletii* (60)

*Crassadoma gigantea* (60)

*Megastraea undosa* (60)

*Lithopoma gibberosa* (60)

*Lytechinus anamesus* (200)

*Pycnopodia helianthoides* (60)

*S. franciscanus* (200)

*S. purpuratus* (200)

*Patiria miniata* (60)

*Pisaster giganteus* (60)

**Version 1.0 2018**

|  |  |  |
| --- | --- | --- |
| **ABUNDANCE RATINGS** |  |  |
| X = present (no rating given) |  |  |
| 0 = noticeably absent, an effort was made to look for an organism that was not found. | | |
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| **NOTES** |  |  |
| j = juvenile |  |  |
| s = shell only |  |  |
| #/j# = (e.g. 2/j3 - adult abundance 2, juvenile abundance 3) | | |

**Algae NOTES:**

**Chlorophyta**

*Codium* spp. *\_\_\_\_\_\_\_\_*

*Derbesia* sp. *\_\_\_\_\_\_\_\_*

*Ulva* spp.  *\_\_\_\_\_\_\_\_*

Other green algae *\_\_\_\_\_\_\_\_*

**Phaeophyta**

*Agarum fimbriatum \_\_\_\_\_\_\_\_*

*Colpomenia* sp. *\_\_\_\_\_\_\_\_*

*Cystoseira* sp. *\_\_\_\_\_\_\_\_*

*Desmarestia* sp. *\_\_\_\_\_\_\_\_*

*Dictyoneuropsis \_\_\_\_\_\_\_\_*

*Dictyota/Pachydictyon\_\_\_\_\_\_\_*

*Dictyopteris* sp. *\_\_\_\_\_\_\_\_*

*Eisenia arborea \_\_\_\_\_\_\_\_*

*Laminaria farlowii \_\_\_\_\_\_\_\_*

*Macrocystis pyrifera \_\_\_\_\_\_\_\_*

*Pterygophora californica\_\_\_\_\_*

*Sargassum muticum \_\_\_\_\_\_\_\_*

*Sargassum horneri* *\_\_\_\_\_\_\_\_*

*Zonaria* sp. *\_\_\_\_\_\_\_\_*

Other brown algae *\_\_\_\_\_\_\_\_*

**Rhodophyta**

*Callophyllis* sp. *\_\_\_\_\_\_\_\_*

*Cryptopleura* spp. *\_\_\_\_\_\_\_\_*

*Gelidium* spp*. \_\_\_\_\_\_\_\_*

*Gigartina* spp*.* *\_\_\_\_\_\_\_\_*

*Laurencia* sp. *\_\_\_\_\_\_\_\_*

*Plocamium* sp. *\_\_\_\_\_\_\_\_*

*Rhodymenia* spp. *\_\_\_\_\_\_\_\_*

Articulated coralline \_*\_\_\_\_\_\_\_*

Encrusting coralline *\_\_\_\_\_\_\_\_*

Other red algae *\_\_\_\_\_\_\_\_*

Misc. plant *\_\_\_\_\_\_\_\_*

Bare rock \_\_\_\_\_\_\_\_

**Version 1.0 2018**

**Misc invert/CNId/SPONGE/Tun**

**PORIFERA NOTES:**Most common misc. invert:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*Haliclona* sp*. \_\_\_\_\_\_*

*Hymenamphiastra cyanocrypta\_\_\_\_*

*Polymastia* spp. *\_\_\_\_\_\_*

*Tethya aurantia \_\_\_\_\_\_*

Other Sponges *\_\_\_\_\_\_*

**ANTHOZOA**

*Anthopleura* spp. *\_\_\_\_\_\_*

*Astrangia lajollaensis \_\_\_\_\_\_*

*Balanophyllia* *elegans \_\_\_\_\_\_*

*Corynactis californica \_\_\_\_\_\_*

*Eugorgia rubens \_\_\_\_\_\_*

*Lophogorgia chilensis \_\_\_\_\_\_*

*Metridium* spp. *\_\_\_\_\_\_*

*Muricea californica \_\_\_\_\_\_*

*Muricea fruticosa \_\_\_\_\_\_*

*Sagartia/Cactosoma* spp. *\_\_\_\_\_\_*

*Urticina lofotensis \_\_\_\_\_\_*

*Urticina* spp. *\_\_\_\_\_\_*

**Hydrozoa**

Hydroid spp. *\_\_\_\_\_\_*

*Stylaster californicus \_\_\_\_\_\_*

**Annelida/Polychaeta**

*Chaetopterus* sp. *\_\_\_\_\_\_*

*Diopatra ornata \_\_\_\_\_\_*

*Dodecaceria* spp *\_\_\_\_\_\_*

*Phragmatopoma californica \_\_\_\_\_\_*

*Salmacina tribranchiata \_\_\_\_\_\_*

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**Arthropoda/Crustacea**

*Balanus* sp. *\_\_\_\_\_\_*

*Cancer* sp. *\_\_\_\_\_\_*

*Panulirus interruptus \_\_\_\_\_\_*

**Bryozoa**

*Bugula* spp*. \_\_\_\_\_\_*

*Costazia costazii. \_\_\_\_\_\_*

*Watersipora* spp. *\_\_\_\_\_\_*

*Diaperoecia californica \_\_\_\_\_\_ Membranipora* spp. *\_\_\_\_\_\_*

Other Bryozoans *\_\_\_\_\_\_*

**Tunicates** *\_\_\_\_\_\_*

*Styela montereyensis \_\_\_\_\_\_*

**Misc. invertebrates** *\_\_\_\_\_\_*

**Molluscs** **NOTES:**

*Aplysia californica \_\_\_\_\_\_\_*

*Bursa californica* \_\_\_\_\_\_

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*Cryptochiton stelleri* \_\_\_\_\_\_

*Cypraea spadicea \_\_\_\_\_\_\_*

*Haliotis assimilis \_\_\_\_\_\_\_*

*Haliotis corrugata* \_\_\_\_\_\_

*Haliotis fulgens \_\_\_\_\_\_\_*

*Haliotis rufescens \_\_\_\_\_\_\_*

*Haliotis sorenseni* \_\_\_\_\_\_

*Kelletia kelletii \_\_\_\_\_\_\_*

*Lithopoma gibberosa* \_\_\_\_\_\_

*Megastraea undosa \_\_\_\_\_\_\_*

*Megathura crenulata \_\_\_\_\_\_\_*

*Octopus* spp. *\_\_\_\_\_\_\_*

*Serpulorbis squamigerus \_\_\_\_\_\_*

*Tegula regina \_\_\_\_\_\_\_*

**Version 1.0 2018**

**ECHINODERMS NOTES:**

*Centrostephanus coronatus \_\_\_\_\_\_*

*Cucumaria* sp. *\_\_\_\_\_\_*

*Dermasterias imbricata \_\_\_\_\_\_*

*Linckia* sp. *\_\_\_\_\_\_*

*Lytechinus anamesus \_\_\_\_\_\_*

*Ophiothrix spiculata \_\_\_\_\_\_*

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*Parastichopus californicus \_\_\_\_\_\_*

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**Comments on ARMS:**

**Comments on Gear / Procedure / Transect/ Misc. obsevations:**

**Version 1.0 2018**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sampling Dates/Cruise#** |  |  | |  |  |
| **Wasting Disease** Urchins:  Stars: |  |  | |  |  |
| **Black Spot Disease** |  |  | |  |  |
| **Lead Line Condition:** |  |  | |  |  |
| **Percent Canopy Cover of**  ***Macrocystis pyrifera*** |  |  | |  |  |
| **Site Status** |  |  | |  |  |
| **# Fishing Lures Found** | **# Fishing Weights Found** | | **Notes:** | | |
| New: Old: | New: Old: | |  | | |

**TEMPERATURE LOGGER:**

|  |  |  |
| --- | --- | --- |
| **Date Deployed** | **Date Retrieved** | **Notes:** |
|  |  | See Temp. logger and site history forms |

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Participants** | **Date Completed** | **Notes** |
| **1 m Quadrats** |  |  |  |
| **5 m Quadrats** |  |  |  |
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| **Roving Diver Fish Count** |  |  |  |
| **Fish Size Frequency** |  |  |  |
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| **ARMS** |  |  |  |
| **Non-KFM** |  |  |  |
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**Version 1.0 2018**

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**Algae NOTES:**

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*Codium* spp. *\_\_\_\_\_\_\_\_*

*Derbesia* sp. *\_\_\_\_\_\_\_\_*

*Ulva* spp.  *\_\_\_\_\_\_\_\_*

Other green algae *\_\_\_\_\_\_\_\_*

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*Colpomenia* sp. *\_\_\_\_\_\_\_\_*

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*Dictyoneuropsis \_\_\_\_\_\_\_\_*

*Dictyota/Pachydictyon\_\_\_\_\_\_\_*

*Dictyopteris* sp. *\_\_\_\_\_\_\_\_*

*Eisenia arborea \_\_\_\_\_\_\_\_*

*Laminaria farlowii \_\_\_\_\_\_\_\_*

*Macrocystis pyrifera \_\_\_\_\_\_\_\_*

*Pterygophora californica\_\_\_\_\_*

*Sargassum muticum \_\_\_\_\_\_\_\_*

*Sargassum horneri* *\_\_\_\_\_\_\_\_*

*Zonaria* sp. *\_\_\_\_\_\_\_\_*

Other brown algae *\_\_\_\_\_\_\_\_*

**Rhodophyta**

*Callophyllis* sp. *\_\_\_\_\_\_\_\_*

*Cryptopleura* spp. *\_\_\_\_\_\_\_\_*

*Gelidium* spp*. \_\_\_\_\_\_\_\_*

*Gigartina* spp*.* *\_\_\_\_\_\_\_\_*

*Laurencia* sp. *\_\_\_\_\_\_\_\_*

*Plocamium* sp. *\_\_\_\_\_\_\_\_*

*Rhodymenia* spp. *\_\_\_\_\_\_\_\_*

Articulated coralline \_*\_\_\_\_\_\_\_*

Encrusting coralline *\_\_\_\_\_\_\_\_*

Other red algae *\_\_\_\_\_\_\_\_*

Misc. plant *\_\_\_\_\_\_\_\_*

Bare rock \_\_\_\_\_\_\_\_

**Version 1.0 2018**

**Misc invert/CNId/SPONGE/Tun**

**PORIFERA NOTES:**Most common misc. invert:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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Other Sponges *\_\_\_\_\_\_*

**ANTHOZOA**

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Hydroid spp. *\_\_\_\_\_\_*

*Stylaster californicus \_\_\_\_\_\_*

**Annelida/Polychaeta**

*Chaetopterus* sp. *\_\_\_\_\_\_*

*Diopatra ornata \_\_\_\_\_\_*

*Dodecaceria* spp *\_\_\_\_\_\_*

*Phragmatopoma californica \_\_\_\_\_\_*

*Salmacina tribranchiata \_\_\_\_\_\_*

*Spirobranchus spinosus \_\_\_\_\_\_*

**Arthropoda/Crustacea**

*Balanus* sp. *\_\_\_\_\_\_*

*Cancer* sp. *\_\_\_\_\_\_*

*Panulirus interruptus \_\_\_\_\_\_*

**Bryozoa**

*Bugula* spp*. \_\_\_\_\_\_*

*Costazia costazii. \_\_\_\_\_\_*

*Watersipora* spp. *\_\_\_\_\_\_*

*Diaperoecia californica \_\_\_\_\_\_ Membranipora* spp. *\_\_\_\_\_\_*

Other Bryozoans *\_\_\_\_\_\_*

**Tunicates** *\_\_\_\_\_\_*

*Styela montereyensis \_\_\_\_\_\_*

**Misc. invertebrates** *\_\_\_\_\_\_*

**Molluscs** **NOTES:**

*Aplysia californica \_\_\_\_\_\_\_*

*Bursa californica* \_\_\_\_\_\_

*Crassadoma gigantea \_\_\_\_\_\_\_*

*Cryptochiton stelleri* \_\_\_\_\_\_

*Cypraea spadicea \_\_\_\_\_\_\_*

*Haliotis assimilis \_\_\_\_\_\_\_*

*Haliotis corrugata* \_\_\_\_\_\_

*Haliotis fulgens \_\_\_\_\_\_\_*

*Haliotis rufescens \_\_\_\_\_\_\_*

*Haliotis sorenseni* \_\_\_\_\_\_

*Kelletia kelletii \_\_\_\_\_\_\_*

*Lithopoma gibberosa* \_\_\_\_\_\_

*Megastraea undosa \_\_\_\_\_\_\_*

*Megathura crenulata \_\_\_\_\_\_\_*

*Octopus* spp. *\_\_\_\_\_\_\_*

*Serpulorbis squamigerus \_\_\_\_\_\_*

*Tegula regina \_\_\_\_\_\_\_*

**Version 1.0 2018**

**ECHINODERMS NOTES:**

*Centrostephanus coronatus \_\_\_\_\_\_*

*Cucumaria* sp. *\_\_\_\_\_\_*

*Dermasterias imbricata \_\_\_\_\_\_*

*Linckia* sp. *\_\_\_\_\_\_*

*Lytechinus anamesus \_\_\_\_\_\_*

*Ophiothrix spiculata \_\_\_\_\_\_*

*Pachythyone rubra \_\_\_\_\_\_*

*Parastichopus californicus \_\_\_\_\_\_*

*Parastichopus parvimensis \_\_\_\_\_\_*

*Patiria miniata \_\_\_\_\_\_*

*Pisaster giganteus \_\_\_\_\_\_*

*Pisaster ochraceus \_\_\_\_\_\_*

*Pycnopodia helianthoides \_\_\_\_\_\_*

*S. purpuratus**\_\_\_\_\_\_*

*S. franciscanus \_\_\_\_\_\_*

**Fish: NOTES:**

*Lythrypnus dalli \_\_\_\_\_\_*

*Coryphopterus nicholsii \_\_\_\_\_\_*

*Alloclinus holderi \_\_\_\_\_\_*

fish observed other than on rdfc or fish transects:

**Comments on ARMS:**

**Comments on Gear / Procedure / Transect/ Misc. obsevations:**

**Version 1.0 2018**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sampling Dates/Cruise#** |  |  | |  |  |
| **Wasting Disease** Urchins:  Stars: |  |  | |  |  |
| **Black Spot Disease** |  |  | |  |  |
| **Lead Line Condition:** |  |  | |  |  |
| **Percent Canopy Cover of**  ***Macrocystis pyrifera*** |  |  | |  |  |
| **Site Status** |  |  | |  |  |
| **# Fishing Lures Found** | **# Fishing Weights Found** | | **Notes:** | | |
| New: Old: | New: Old: | |  | | |

**TEMPERATURE LOGGER:**

|  |  |  |
| --- | --- | --- |
| **Date Deployed** | **Date Retrieved** | **Notes:** |
|  |  | See Temp. logger and site history forms |

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Participants** | **Date Completed** | **Notes** |
| **1 m Quadrats** |  |  |  |
| **5 m Quadrats** |  |  |  |
| **RPCs** |  |  |  |
| **Band Transects** |  |  |  |
| **Visual Fish Transects** |  |  |  |
| **Roving Diver Fish Count** |  |  |  |
| **Fish Size Frequency** |  |  |  |
| **Site (Video) Documentation** |  |  |  |
| **ARMS** |  |  |  |
| **Non-KFM** |  |  |  |
| **Species List** |  |  |  |

**SIZE FREQUENCY MEASURMENTS:** *Tegula regina* (60) \_\_\_\_\_\_

*Macrocystis pyrifera* (100)

*Tethya aurantia* (60)

*Stylaster californica* (50)

*Lophogorgia chilensis* (60)

*Muricea fruticosa* (60)

*Muricea californica* (60)

*Megathura crenulata* (60)

*Haliotis rufescens* (60)

*Haliotis corrugata* (60)

*Haliotis fulgens* (60)

*Kelletia kelletii* (60)

*Crassadoma gigantea* (60)

*Megastraea undosa* (60)

*Lithopoma gibberosa* (60)

*Lytechinus anamesus* (200)

*Pycnopodia helianthoides* (60)

*S. franciscanus* (200)

*S. purpuratus* (200)

*Patiria miniata* (60)

*Pisaster giganteus* (60)

**Version 1.0 2018**

|  |  |  |
| --- | --- | --- |
| **ABUNDANCE RATINGS** |  |  |
| X = present (no rating given) |  |  |
| 0 = noticeably absent, an effort was made to look for an organism that was not found. | | |
| 1 = rare, few organisms found |  |  |
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| 4 = abundant, organism present in higher than normal densities | | |
| **NOTES** |  |  |
| j = juvenile |  |  |
| s = shell only |  |  |
| #/j# = (e.g. 2/j3 - adult abundance 2, juvenile abundance 3) | | |

**Algae NOTES:**

**Chlorophyta**

*Codium* spp. *\_\_\_\_\_\_\_\_*

*Derbesia* sp. *\_\_\_\_\_\_\_\_*

*Ulva* spp.  *\_\_\_\_\_\_\_\_*

Other green algae *\_\_\_\_\_\_\_\_*

**Phaeophyta**

*Agarum fimbriatum \_\_\_\_\_\_\_\_*

*Colpomenia* sp. *\_\_\_\_\_\_\_\_*

*Cystoseira* sp. *\_\_\_\_\_\_\_\_*

*Desmarestia* sp. *\_\_\_\_\_\_\_\_*

*Dictyoneuropsis \_\_\_\_\_\_\_\_*

*Dictyota/Pachydictyon\_\_\_\_\_\_\_*

*Dictyopteris* sp. *\_\_\_\_\_\_\_\_*

*Eisenia arborea \_\_\_\_\_\_\_\_*

*Laminaria farlowii \_\_\_\_\_\_\_\_*

*Macrocystis pyrifera \_\_\_\_\_\_\_\_*

*Pterygophora californica\_\_\_\_\_*

*Sargassum muticum \_\_\_\_\_\_\_\_*

*Sargassum horneri* *\_\_\_\_\_\_\_\_*

*Zonaria* sp. *\_\_\_\_\_\_\_\_*

Other brown algae *\_\_\_\_\_\_\_\_*

**Rhodophyta**

*Callophyllis* sp. *\_\_\_\_\_\_\_\_*

*Cryptopleura* spp. *\_\_\_\_\_\_\_\_*

*Gelidium* spp*. \_\_\_\_\_\_\_\_*

*Gigartina* spp*.* *\_\_\_\_\_\_\_\_*

*Laurencia* sp. *\_\_\_\_\_\_\_\_*

*Plocamium* sp. *\_\_\_\_\_\_\_\_*

*Rhodymenia* spp. *\_\_\_\_\_\_\_\_*

Articulated coralline \_*\_\_\_\_\_\_\_*

Encrusting coralline *\_\_\_\_\_\_\_\_*

Other red algae *\_\_\_\_\_\_\_\_*

Misc. plant *\_\_\_\_\_\_\_\_*

Bare rock \_\_\_\_\_\_\_\_

**Version 1.0 2018**

**Misc invert/CNId/SPONGE/Tun**

**PORIFERA NOTES:**Most common misc. invert:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*Haliclona* sp*. \_\_\_\_\_\_*

*Hymenamphiastra cyanocrypta\_\_\_\_*

*Polymastia* spp. *\_\_\_\_\_\_*

*Tethya aurantia \_\_\_\_\_\_*

Other Sponges *\_\_\_\_\_\_*

**ANTHOZOA**

*Anthopleura* spp. *\_\_\_\_\_\_*

*Astrangia lajollaensis \_\_\_\_\_\_*

*Balanophyllia* *elegans \_\_\_\_\_\_*

*Corynactis californica \_\_\_\_\_\_*

*Eugorgia rubens \_\_\_\_\_\_*

*Lophogorgia chilensis \_\_\_\_\_\_*

*Metridium* spp. *\_\_\_\_\_\_*

*Muricea californica \_\_\_\_\_\_*

*Muricea fruticosa \_\_\_\_\_\_*

*Sagartia/Cactosoma* spp. *\_\_\_\_\_\_*

*Urticina lofotensis \_\_\_\_\_\_*

*Urticina* spp. *\_\_\_\_\_\_*

**Hydrozoa**

Hydroid spp. *\_\_\_\_\_\_*

*Stylaster californicus \_\_\_\_\_\_*

**Annelida/Polychaeta**

*Chaetopterus* sp. *\_\_\_\_\_\_*

*Diopatra ornata \_\_\_\_\_\_*

*Dodecaceria* spp *\_\_\_\_\_\_*

*Phragmatopoma californica \_\_\_\_\_\_*

*Salmacina tribranchiata \_\_\_\_\_\_*

*Spirobranchus spinosus \_\_\_\_\_\_*

**Arthropoda/Crustacea**

*Balanus* sp. *\_\_\_\_\_\_*

*Cancer* sp. *\_\_\_\_\_\_*

*Panulirus interruptus \_\_\_\_\_\_*

**Bryozoa**

*Bugula* spp*. \_\_\_\_\_\_*

*Costazia costazii. \_\_\_\_\_\_*

*Watersipora* spp. *\_\_\_\_\_\_*

*Diaperoecia californica \_\_\_\_\_\_ Membranipora* spp. *\_\_\_\_\_\_*

Other Bryozoans *\_\_\_\_\_\_*

**Tunicates** *\_\_\_\_\_\_*

*Styela montereyensis \_\_\_\_\_\_*

**Misc. invertebrates** *\_\_\_\_\_\_*

**Molluscs** **NOTES:**

*Aplysia californica \_\_\_\_\_\_\_*

*Bursa californica \_\_\_\_\_\_\_*

*Crassadoma gigantea \_\_\_\_\_\_\_*

*Cryptochiton stelleri \_\_\_\_\_\_\_*

*Cypraea spadicea* \_\_\_\_\_\_

*Haliotis assimilis \_\_\_\_\_\_\_*

*Haliotis corrugata \_\_\_\_\_\_\_*

*Haliotis fulgens* \_\_\_\_\_\_

*Haliotis rufescens \_\_\_\_\_\_\_*

*Haliotis sorenseni* \_\_\_\_\_\_

*Kelletia kelletii \_\_\_\_\_\_\_*

*Lithopoma gibberosa \_\_\_\_\_\_\_*

Megastraea undosa \_\_\_\_\_\_\_

*Megathura crenulata \_\_\_\_\_\_\_*

*Octopus* spp. *\_\_\_\_\_\_\_*

*Serpulorbis squamigerus \_\_\_\_\_\_*

*Tegula regina \_\_\_\_\_\_\_*

**Version 1.0 2018**

**ECHINODERMS NOTES:**

*Centrostephanus coronatus \_\_\_\_\_\_*

*Cucumaria* sp. *\_\_\_\_\_\_*

*Dermasterias imbricata \_\_\_\_\_\_*

*Linckia* sp. *\_\_\_\_\_\_*

*Lytechinus anamesus \_\_\_\_\_\_*

*Ophiothrix spiculata \_\_\_\_\_\_*

*Pachythyone rubra \_\_\_\_\_\_*

*Parastichopus californicus \_\_\_\_\_\_*

*Parastichopus parvimensis \_\_\_\_\_\_*

*Patiria miniata \_\_\_\_\_\_*

*Pisaster giganteus \_\_\_\_\_\_*

*Pisaster ochraceus \_\_\_\_\_\_*

*Pycnopodia helianthoides \_\_\_\_\_\_*

*S. purpuratus**\_\_\_\_\_\_*

*S. franciscanus \_\_\_\_\_\_*

**Fish: NOTES:**

*Lythrypnus dalli \_\_\_\_\_\_*

*Coryphopterus nicholsii \_\_\_\_\_\_*

*Alloclinus holderi \_\_\_\_\_\_*

fish observed other than on rdfc or fish transects:

**Comments on ARMS:**

**Comments on Gear / Procedure / Transect/ Misc. obsevations:**

**Version 1.0 2018**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sampling Dates/Cruise#** |  |  | |  |  |
| **Wasting Disease** Urchins:  Stars: |  |  | |  |  |
| **Black Spot Disease** |  |  | |  |  |
| **Lead Line Condition:** |  |  | |  |  |
| **Percent Canopy Cover of**  ***Macrocystis pyrifera*** |  |  | |  |  |
| **Site Status** |  |  | |  |  |
| **# Fishing Lures Found** | **# Fishing Weights Found** | | **Notes:** | | |
| New: Old: | New: Old: | |  | | |

**TEMPERATURE LOGGER:**

|  |  |  |
| --- | --- | --- |
| **Date Deployed** | **Date Retrieved** | **Notes:** |
|  |  | See Temp. logger and site history forms |

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Participants** | **Date Completed** | **Notes** |
| **1 m Quadrats** |  |  |  |
| **5 m Quadrats** |  |  |  |
| **RPCs** |  |  |  |
| **Band Transects** |  |  |  |
| **Visual Fish Transects** |  |  |  |
| **Roving Diver Fish Count** |  |  |  |
| **Fish Size Frequency** |  |  |  |
| **Site (Video) Documentation** |  |  |  |
| **ARMS** |  |  |  |
| **Non-KFM** |  |  |  |
| **Species List** |  |  |  |

**SIZE FREQUENCY MEASURMENTS:** *Tegula regina* (60) \_\_\_\_\_\_

*Macrocystis pyrifera* (100)

*Tethya aurantia* (60)

*Stylaster californica* (50)

*Lophogorgia chilensis* (60)

*Muricea fruticosa* (60)

*Muricea californica* (60)

*Megathura crenulata* (60)

*Haliotis rufescens* (60)

*Haliotis corrugata* (60)

*Haliotis fulgens* (60)

*Kelletia kelletii* (60)

*Crassadoma gigantea* (60)

*Megastraea undosa* (60)

*Lithopoma gibberosa* (60)

*Lytechinus anamesus* (200)

*Pycnopodia helianthoides* (60)

*S. franciscanus* (200)

*S. purpuratus* (200)

*Patiria miniata* (60)

*Pisaster giganteus* (60)

**Version 1.0 2018**

|  |  |  |
| --- | --- | --- |
| **ABUNDANCE RATINGS** |  |  |
| X = present (no rating given) |  |  |
| 0 = noticeably absent, an effort was made to look for an organism that was not found. | | |
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| **NOTES** |  |  |
| j = juvenile |  |  |
| s = shell only |  |  |
| #/j# = (e.g. 2/j3 - adult abundance 2, juvenile abundance 3) | | |

**Algae NOTES:**

**Chlorophyta**

*Codium* spp. *\_\_\_\_\_\_\_\_*

*Derbesia* sp. *\_\_\_\_\_\_\_\_*

*Ulva* spp.  *\_\_\_\_\_\_\_\_*

Other green algae *\_\_\_\_\_\_\_\_*

**Phaeophyta**

*Agarum fimbriatum \_\_\_\_\_\_\_\_*

*Colpomenia* sp. *\_\_\_\_\_\_\_\_*

*Cystoseira* sp. *\_\_\_\_\_\_\_\_*

*Desmarestia* sp. *\_\_\_\_\_\_\_\_*

*Dictyoneuropsis \_\_\_\_\_\_\_\_*

*Dictyota/Pachydictyon\_\_\_\_\_\_\_*

*Dictyopteris* sp. *\_\_\_\_\_\_\_\_*

*Eisenia arborea \_\_\_\_\_\_\_\_*

*Laminaria farlowii \_\_\_\_\_\_\_\_*

*Macrocystis pyrifera \_\_\_\_\_\_\_\_*

*Pterygophora californica\_\_\_\_\_*

*Sargassum muticum \_\_\_\_\_\_\_\_*

*Sargassum horneri* *\_\_\_\_\_\_\_\_*

*Zonaria* sp. *\_\_\_\_\_\_\_\_*

Other brown algae *\_\_\_\_\_\_\_\_*

**Rhodophyta**

*Callophyllis* sp. *\_\_\_\_\_\_\_\_*

*Cryptopleura* spp. *\_\_\_\_\_\_\_\_*

*Gelidium* spp*. \_\_\_\_\_\_\_\_*

*Gigartina* spp*.* *\_\_\_\_\_\_\_\_*

*Laurencia* sp. *\_\_\_\_\_\_\_\_*

*Plocamium* sp. *\_\_\_\_\_\_\_\_*

*Rhodymenia* spp. *\_\_\_\_\_\_\_\_*

Articulated coralline \_*\_\_\_\_\_\_\_*

Encrusting coralline *\_\_\_\_\_\_\_\_*

Other red algae *\_\_\_\_\_\_\_\_*

Misc. plant *\_\_\_\_\_\_\_\_*

Bare rock \_\_\_\_\_\_\_\_

**Version 1.0 2018**

**Misc invert/CNId/SPONGE/Tun**

**PORIFERA NOTES:**Most common misc. invert:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*Haliclona* sp*. \_\_\_\_\_\_*

*Hymenamphiastra cyanocrypta\_\_\_\_*

*Polymastia* spp. *\_\_\_\_\_\_*

*Tethya aurantia \_\_\_\_\_\_*

Other Sponges *\_\_\_\_\_\_*

**ANTHOZOA**

*Anthopleura* spp. *\_\_\_\_\_\_*

*Astrangia lajollaensis \_\_\_\_\_\_*

*Balanophyllia* *elegans \_\_\_\_\_\_*

*Corynactis californica \_\_\_\_\_\_*

*Eugorgia rubens \_\_\_\_\_\_*

*Lophogorgia chilensis \_\_\_\_\_\_*

*Metridium* spp. *\_\_\_\_\_\_*

*Muricea californica \_\_\_\_\_\_*

*Muricea fruticosa \_\_\_\_\_\_*

*Sagartia/Cactosoma* spp. *\_\_\_\_\_\_*

*Urticina lofotensis \_\_\_\_\_\_*

*Urticina* spp. *\_\_\_\_\_\_*

**Hydrozoa**

Hydroid spp. *\_\_\_\_\_\_*

*Stylaster californicus \_\_\_\_\_\_*

**Annelida/Polychaeta**

*Chaetopterus* sp. *\_\_\_\_\_\_*

*Diopatra ornata \_\_\_\_\_\_*

*Dodecaceria* spp *\_\_\_\_\_\_*

*Phragmatopoma californica \_\_\_\_\_\_*

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**Arthropoda/Crustacea**

*Balanus* sp. *\_\_\_\_\_\_*

*Cancer* sp. *\_\_\_\_\_\_*

*Panulirus interruptus \_\_\_\_\_\_*

**Bryozoa**

*Bugula* spp*. \_\_\_\_\_\_*

*Costazia costazii. \_\_\_\_\_\_*

*Watersipora* spp. *\_\_\_\_\_\_*

*Diaperoecia californica \_\_\_\_\_\_ Membranipora* spp. *\_\_\_\_\_\_*

Other Bryozoans *\_\_\_\_\_\_*

**Tunicates** *\_\_\_\_\_\_*

*Styela montereyensis \_\_\_\_\_\_*

**Misc. invertebrates** *\_\_\_\_\_\_*

**Molluscs** **NOTES:**

*Aplysia californica \_\_\_\_\_\_\_*

Bursa californica \_\_\_\_\_\_\_

*Crassadoma gigantea \_\_\_\_\_\_\_*

*Cryptochiton stelleri \_\_\_\_\_\_\_*

*Cypraea spadicea \_\_\_\_\_\_\_*

*Haliotis assimilis \_\_\_\_\_\_\_*

*Haliotis corrugata \_\_\_\_\_\_\_*

*Haliotis fulgens \_\_\_\_\_\_\_*

*Haliotis rufescens \_\_\_\_\_\_\_*

*Haliotis sorenseni \_*\_\_\_\_\_\_

*Kelletia kelletii \_\_\_\_\_\_\_*

*Lithopoma gibberosa* \_\_\_\_\_\_

*Megastraea undosa \_\_\_\_\_\_\_*

*Megathura crenulata \_\_\_\_\_\_\_*

*Octopus spp. \_\_\_\_\_\_\_*

*Serpulorbis squamigerus \_\_\_\_\_\_*

*Tegula regina \_\_\_\_\_\_\_*

**Version 1.0 2018**

**ECHINODERMS NOTES:**

*Centrostephanus coronatus \_\_\_\_\_\_*

*Cucumaria* sp. *\_\_\_\_\_\_*

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**Fish: NOTES:**

*Lythrypnus dalli \_\_\_\_\_\_*

*Coryphopterus nicholsii \_\_\_\_\_\_*

*Alloclinus holderi \_\_\_\_\_\_*

fish observed other than on rdfc or fish transects:

**Comments on ARMS:**

**Comments on Gear / Procedure / Transect/ Misc. obsevations:**

**Version 1.0 2018**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sampling Dates/Cruise#** |  |  | |  |  |
| **Wasting Disease** Urchins:  Stars: |  |  | |  |  |
| **Black Spot Disease** |  |  | |  |  |
| **Lead Line Condition:** |  |  | |  |  |
| **Percent Canopy Cover of**  ***Macrocystis pyrifera*** |  |  | |  |  |
| **Site Status** |  |  | |  |  |
| **# Fishing Lures Found** | **# Fishing Weights Found** | | **Notes:** | | |
| New: Old: | New: Old: | |  | | |

**TEMPERATURE LOGGER:**

|  |  |  |
| --- | --- | --- |
| **Date Deployed** | **Date Retrieved** | **Notes:** |
|  |  | See Temp. logger and site history forms |

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Participants** | **Date Completed** | **Notes** |
| **1 m Quadrats** |  |  |  |
| **5 m Quadrats** |  |  |  |
| **RPCs** |  |  |  |
| **Band Transects** |  |  |  |
| **Visual Fish Transects** |  |  |  |
| **Roving Diver Fish Count** |  |  |  |
| **Fish Size Frequency** |  |  |  |
| **Site (Video) Documentation** |  |  |  |
| **ARMS** |  |  |  |
| **Non-KFM** |  |  |  |
| **Species List** |  |  |  |

**SIZE FREQUENCY MEASURMENTS:** *Tegula regina* (60) \_\_\_\_\_\_

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**Version 1.0 2018**

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| **NOTES** |  |  |
| j = juvenile |  |  |
| s = shell only |  |  |
| #/j# = (e.g. 2/j3 - adult abundance 2, juvenile abundance 3) | | |

**Algae NOTES:**

**Chlorophyta**

*Codium* spp. *\_\_\_\_\_\_\_\_*

*Derbesia* sp. *\_\_\_\_\_\_\_\_*

*Ulva* spp.  *\_\_\_\_\_\_\_\_*

Other green algae *\_\_\_\_\_\_\_\_*

**Phaeophyta**

*Agarum fimbriatum \_\_\_\_\_\_\_\_*

*Colpomenia* sp. *\_\_\_\_\_\_\_\_*

*Cystoseira* sp. *\_\_\_\_\_\_\_\_*

*Desmarestia* sp. *\_\_\_\_\_\_\_\_*

*Dictyoneuropsis \_\_\_\_\_\_\_\_*

*Dictyota/Pachydictyon\_\_\_\_\_\_\_*

*Dictyopteris* sp. *\_\_\_\_\_\_\_\_*

*Eisenia arborea \_\_\_\_\_\_\_\_*

*Laminaria farlowii \_\_\_\_\_\_\_\_*

*Macrocystis pyrifera \_\_\_\_\_\_\_\_*

*Pterygophora californica\_\_\_\_\_*

*Sargassum muticum \_\_\_\_\_\_\_\_*

*Sargassum horneri* *\_\_\_\_\_\_\_\_*

*Zonaria* sp. *\_\_\_\_\_\_\_\_*

Other brown algae *\_\_\_\_\_\_\_\_*

**Rhodophyta**

*Callophyllis* sp. *\_\_\_\_\_\_\_\_*

*Cryptopleura* spp. *\_\_\_\_\_\_\_\_*

*Gelidium* spp*. \_\_\_\_\_\_\_\_*

*Gigartina* spp*.* *\_\_\_\_\_\_\_\_*

*Laurencia* sp. *\_\_\_\_\_\_\_\_*

*Plocamium* sp. *\_\_\_\_\_\_\_\_*

*Rhodymenia* spp. *\_\_\_\_\_\_\_\_*

Articulated coralline \_*\_\_\_\_\_\_\_*

Encrusting coralline *\_\_\_\_\_\_\_\_*

Other red algae *\_\_\_\_\_\_\_\_*

Misc. plant *\_\_\_\_\_\_\_\_*

Bare rock \_\_\_\_\_\_\_\_

**Version 1.0 2018**

**Misc invert/CNId/SPONGE/Tun**

**PORIFERA NOTES:**Most common misc. invert:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*Haliclona* sp*. \_\_\_\_\_\_*

*Hymenamphiastra cyanocrypta\_\_\_\_*

*Polymastia* spp. *\_\_\_\_\_\_*

*Tethya aurantia \_\_\_\_\_\_*

Other Sponges *\_\_\_\_\_\_*

**ANTHOZOA**

*Anthopleura* spp. *\_\_\_\_\_\_*

*Astrangia lajollaensis \_\_\_\_\_\_*

*Balanophyllia* *elegans \_\_\_\_\_\_*

*Corynactis californica \_\_\_\_\_\_*

*Eugorgia rubens \_\_\_\_\_\_*

*Lophogorgia chilensis \_\_\_\_\_\_*

*Metridium* spp. *\_\_\_\_\_\_*

*Muricea californica \_\_\_\_\_\_*

*Muricea fruticosa \_\_\_\_\_\_*

*Sagartia/Cactosoma* spp. *\_\_\_\_\_\_*

*Urticina lofotensis \_\_\_\_\_\_*

*Urticina* spp. *\_\_\_\_\_\_*

**Hydrozoa**

Hydroid spp. *\_\_\_\_\_\_*

*Stylaster californicus \_\_\_\_\_\_*

**Annelida/Polychaeta**

*Chaetopterus* sp. *\_\_\_\_\_\_*

*Diopatra ornata \_\_\_\_\_\_*

*Dodecaceria* spp *\_\_\_\_\_\_*

*Phragmatopoma californica \_\_\_\_\_\_*

*Salmacina tribranchiata \_\_\_\_\_\_*

*Spirobranchus spinosus \_\_\_\_\_\_*

**Arthropoda/Crustacea**

*Balanus* sp. *\_\_\_\_\_\_*

*Cancer* sp. *\_\_\_\_\_\_*

*Panulirus interruptus \_\_\_\_\_\_*

**Bryozoa**

*Bugula* spp*. \_\_\_\_\_\_*

*Costazia costazii. \_\_\_\_\_\_*

*Watersipora* spp. *\_\_\_\_\_\_*

*Diaperoecia californica \_\_\_\_\_\_ Membranipora* spp. *\_\_\_\_\_\_*

Other Bryozoans *\_\_\_\_\_\_*

**Tunicates** *\_\_\_\_\_\_*

*Styela montereyensis \_\_\_\_\_\_*

**Misc. invertebrates** *\_\_\_\_\_\_*

**Molluscs** **NOTES:**

*Aplysia californica \_\_\_\_\_\_\_*

*Bursa californica* \_\_\_\_\_\_\_

*Crassadoma gigantea \_\_\_\_\_\_\_*

*Cryptochiton stelleri* \_\_\_\_\_\_\_

*Cypraea spadicea \_\_\_\_\_\_\_*

*Haliotis assimilis \_\_\_\_\_\_\_*

*Haliotis corrugata* \_\_\_\_\_\_\_

*Haliotis fulgens \_\_\_\_\_\_\_*

*Haliotis rufescens \_\_\_\_\_\_\_*

*Haliotis sorenseni* \_\_\_\_\_\_\_

*Kelletia kelletii \_\_\_\_\_\_\_*

*Lithopoma gibberosa* \_\_\_\_\_\_\_

*Megastraea undosa \_\_\_\_\_\_\_*

*Megathura crenulata \_\_\_\_\_\_\_*

*Octopus* spp. *\_\_\_\_\_\_\_*

*Serpulorbis squamigerus \_\_\_\_\_\_*

*Tegula regina \_\_\_\_\_\_\_*

**Version 1.0 2018**

**ECHINODERMS NOTES:**

*Centrostephanus coronatus \_\_\_\_\_\_*

*Cucumaria* sp. *\_\_\_\_\_\_*

*Dermasterias imbricata \_\_\_\_\_\_*

*Linckia* sp. *\_\_\_\_\_\_*

*Lytechinus anamesus \_\_\_\_\_\_*

*Ophiothrix spiculata \_\_\_\_\_\_*

*Pachythyone rubra \_\_\_\_\_\_*

*Parastichopus californicus \_\_\_\_\_\_*

*Parastichopus parvimensis \_\_\_\_\_\_*

*Patiria miniata \_\_\_\_\_\_*

*Pisaster giganteus \_\_\_\_\_\_*

*Pisaster ochraceus \_\_\_\_\_\_*

*Pycnopodia helianthoides \_\_\_\_\_\_*

*S. purpuratus**\_\_\_\_\_\_*

*S. franciscanus \_\_\_\_\_\_*

**Fish: NOTES:**

*Lythrypnus dalli \_\_\_\_\_\_*

*Coryphopterus nicholsii \_\_\_\_\_\_*

*Alloclinus holderi \_\_\_\_\_\_*

fish observed other than on rdfc or fish transects:

**Comments on ARMS:**

**Comments on Gear / Procedure / Transect/ Misc. obsevations:**

**Version 1.0 2018**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sampling Dates/Cruise#** |  |  | |  |  |
| **Wasting Disease** Urchins:  Stars: |  |  | |  |  |
| **Black Spot Disease** |  |  | |  |  |
| **Lead Line Condition:** |  |  | |  |  |
| **Percent Canopy Cover of**  ***Macrocystis pyrifera*** |  |  | |  |  |
| **Site Status** |  |  | |  |  |
| **# Fishing Lures Found** | **# Fishing Weights Found** | | **Notes:** | | |
| New: Old: | New: Old: | |  | | |

**TEMPERATURE LOGGER:**

|  |  |  |
| --- | --- | --- |
| **Date Deployed** | **Date Retrieved** | **Notes:** |
|  |  | See Temp. logger and site history forms |

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Participants** | **Date Completed** | **Notes** |
| **1 m Quadrats** |  |  |  |
| **5 m Quadrats** |  |  |  |
| **RPCs** |  |  |  |
| **Band Transects** |  |  |  |
| **Visual Fish Transects** |  |  |  |
| **Roving Diver Fish Count** |  |  |  |
| **Fish Size Frequency** |  |  |  |
| **Site (Video) Documentation** |  |  |  |
| **ARMS** |  |  |  |
| **Non-KFM** |  |  |  |
| **Species List** |  |  |  |

**SIZE FREQUENCY MEASURMENTS:** *Tegula regina* (60) \_\_\_\_\_\_

*Macrocystis pyrifera* (100)

*Tethya aurantia* (60)

*Stylaster californica* (50)

*Lophogorgia chilensis* (60)

*Muricea fruticosa* (60)

*Muricea californica* (60)

*Megathura crenulata* (60)

*Haliotis rufescens* (60)

*Haliotis corrugata* (60)

*Haliotis fulgens* (60)

*Kelletia kelletii* (60)

*Crassadoma gigantea* (60)

*Megastraea undosa* (60)

*Lithopoma gibberosa* (60)

*Lytechinus anamesus* (200)

*Pycnopodia helianthoides* (60)

*S. franciscanus* (200)

*S. purpuratus* (200)

*Patiria miniata* (60)

*Pisaster giganteus* (60)

**Version 1.0 2018**

|  |  |  |
| --- | --- | --- |
| **ABUNDANCE RATINGS** |  |  |
| X = present (no rating given) |  |  |
| 0 = noticeably absent, an effort was made to look for an organism that was not found. | | |
| 1 = rare, few organisms found |  |  |
| 2 = present, organism found in moderate numbers | |  |
| 3 = common, organism found over most of the site or in high density patches | | |
| 4 = abundant, organism present in higher than normal densities | | |
| **NOTES** |  |  |
| j = juvenile |  |  |
| s = shell only |  |  |
| #/j# = (e.g. 2/j3 - adult abundance 2, juvenile abundance 3) | | |

**Algae NOTES:**

**Chlorophyta**

*Codium* spp. *\_\_\_\_\_\_\_\_*

*Derbesia* sp. *\_\_\_\_\_\_\_\_*

*Ulva* spp.  *\_\_\_\_\_\_\_\_*

Other green algae *\_\_\_\_\_\_\_\_*

**Phaeophyta**

*Agarum fimbriatum \_\_\_\_\_\_\_\_*

*Colpomenia* sp. *\_\_\_\_\_\_\_\_*

*Cystoseira* sp. *\_\_\_\_\_\_\_\_*

*Desmarestia* sp. *\_\_\_\_\_\_\_\_*

*Dictyoneuropsis \_\_\_\_\_\_\_\_*

*Dictyota/Pachydictyon\_\_\_\_\_\_\_*

*Dictyopteris* sp. *\_\_\_\_\_\_\_\_*

*Eisenia arborea \_\_\_\_\_\_\_\_*

*Laminaria farlowii \_\_\_\_\_\_\_\_*

*Macrocystis pyrifera \_\_\_\_\_\_\_\_*

*Pterygophora californica\_\_\_\_\_*

*Sargassum muticum \_\_\_\_\_\_\_\_*

*Sargassum horneri* *\_\_\_\_\_\_\_\_*

*Zonaria* sp. *\_\_\_\_\_\_\_\_*

Other brown algae *\_\_\_\_\_\_\_\_*

**Rhodophyta**

*Callophyllis* sp. *\_\_\_\_\_\_\_\_*

*Cryptopleura* spp. *\_\_\_\_\_\_\_\_*

*Gelidium* spp*. \_\_\_\_\_\_\_\_*

*Gigartina* spp*.* *\_\_\_\_\_\_\_\_*

*Laurencia* sp. *\_\_\_\_\_\_\_\_*

*Plocamium* sp. *\_\_\_\_\_\_\_\_*

*Rhodymenia* spp. *\_\_\_\_\_\_\_\_*

Articulated coralline \_*\_\_\_\_\_\_\_*

Encrusting coralline *\_\_\_\_\_\_\_\_*

Other red algae *\_\_\_\_\_\_\_\_*

Misc. plant *\_\_\_\_\_\_\_\_*

Bare rock \_\_\_\_\_\_\_\_

**Version 1.0 2018**

**8**

**Misc invert/CNId/SPONGE/Tun**

**PORIFERA NOTES:**Most common misc. invert:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*Haliclona* sp*. \_\_\_\_\_\_*

*Hymenamphiastra cyanocrypta\_\_\_\_*

*Polymastia* spp. *\_\_\_\_\_\_*

*Tethya aurantia \_\_\_\_\_\_*

Other Sponges *\_\_\_\_\_\_*

**ANTHOZOA**

*Anthopleura* spp. *\_\_\_\_\_\_*

*Astrangia lajollaensis \_\_\_\_\_\_*

*Balanophyllia* *elegans \_\_\_\_\_\_*

*Corynactis californica \_\_\_\_\_\_*

*Eugorgia rubens \_\_\_\_\_\_*

*Lophogorgia chilensis \_\_\_\_\_\_*

*Metridium* spp. *\_\_\_\_\_\_*

*Muricea californica \_\_\_\_\_\_*

*Muricea fruticosa \_\_\_\_\_\_*

*Sagartia/Cactosoma* spp. *\_\_\_\_\_\_*

*Urticina lofotensis \_\_\_\_\_\_*

*Urticina* spp. *\_\_\_\_\_\_*

**Hydrozoa**

Hydroid spp. *\_\_\_\_\_\_*

*Stylaster californicus \_\_\_\_\_\_*

**Annelida/Polychaeta**

*Chaetopterus* sp. *\_\_\_\_\_\_*

*Diopatra ornata \_\_\_\_\_\_*

*Dodecaceria* spp *\_\_\_\_\_\_*

*Phragmatopoma californica \_\_\_\_\_\_*

*Salmacina tribranchiata \_\_\_\_\_\_*

*Spirobranchus spinosus \_\_\_\_\_\_*

**Arthropoda/Crustacea**

*Balanus* sp. *\_\_\_\_\_\_*

*Cancer* sp. *\_\_\_\_\_\_*

*Panulirus interruptus \_\_\_\_\_\_*

**Bryozoa**

*Bugula* spp*. \_\_\_\_\_\_*

*Costazia costazii. \_\_\_\_\_\_*

*Watersipora* spp. *\_\_\_\_\_\_*

*Diaperoecia californica \_\_\_\_\_\_ Membranipora* spp. *\_\_\_\_\_\_*

Other Bryozoans *\_\_\_\_\_\_*

**Tunicates** *\_\_\_\_\_\_*

*Styela montereyensis \_\_\_\_\_\_*

**Misc. invertebrates** *\_\_\_\_\_\_*

**Molluscs** **NOTES:**

*Aplysia californica \_\_\_\_\_\_\_*

*Bursa californica* \_\_\_\_\_\_

*Crassadoma gigantea \_\_\_\_\_\_\_*

*Cryptochiton stelleri* \_\_\_\_\_\_

*Cypraea spadicea \_\_\_\_\_\_\_*

*Haliotis assimilis \_\_\_\_\_\_\_*

*Haliotis corrugata* \_\_\_\_\_\_

*Haliotis fulgens \_\_\_\_\_\_\_*

*Haliotis rufescens \_\_\_\_\_\_\_*

*Haliotis sorenseni* \_\_\_\_\_\_

*Kelletia kelletii \_\_\_\_\_\_\_*

*Lithopoma gibberosa* \_\_\_\_\_\_

*Megastraea undosa \_\_\_\_\_\_\_*

*Megathura crenulata \_\_\_\_\_\_\_*

*Octopus* spp. *\_\_\_\_\_\_\_*

*Serpulorbis squamigerus \_\_\_\_\_\_*

*Tegula regina \_\_\_\_\_\_\_*

**Version 1.0 2018**

**ECHINODERMS NOTES:**

*Centrostephanus coronatus \_\_\_\_\_\_*

*Cucumaria* sp. *\_\_\_\_\_\_*

*Dermasterias imbricata \_\_\_\_\_\_*

*Linckia* sp. *\_\_\_\_\_\_*

*Lytechinus anamesus \_\_\_\_\_\_*

*Ophiothrix spiculata \_\_\_\_\_\_*

*Pachythyone rubra \_\_\_\_\_\_*

*Parastichopus californicus \_\_\_\_\_\_*

*Parastichopus parvimensis \_\_\_\_\_\_*

*Patiria miniata \_\_\_\_\_\_*

*Pisaster giganteus \_\_\_\_\_\_*

*Pisaster ochraceus \_\_\_\_\_\_*

*Pycnopodia helianthoides \_\_\_\_\_\_*

*S. purpuratus**\_\_\_\_\_\_*

*S. franciscanus \_\_\_\_\_\_*

**Fish: NOTES:**

*Lythrypnus dalli \_\_\_\_\_\_*

*Coryphopterus nicholsii \_\_\_\_\_\_*

*Alloclinus holderi \_\_\_\_\_\_*

fish observed other than on rdfc or fish transects:

**Comments on ARMS:**

**Comments on Gear / Procedure / Transect/ Misc. obsevations:**

**Version 1.0 2018**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sampling Dates/Cruise#** |  |  | |  |  |
| **Wasting Disease** Urchins:  Stars: |  |  | |  |  |
| **Black Spot Disease** |  |  | |  |  |
| **Lead Line Condition:** |  |  | |  |  |
| **Percent Canopy Cover of**  ***Macrocystis pyrifera*** |  |  | |  |  |
| **Site Status** |  |  | |  |  |
| **# Fishing Lures Found** | **# Fishing Weights Found** | | **Notes:** | | |
| New: Old: | New: Old: | |  | | |

**TEMPERATURE LOGGER:**

|  |  |  |
| --- | --- | --- |
| **Date Deployed** | **Date Retrieved** | **Notes:** |
|  |  | See Temp. logger and site history forms |

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Participants** | **Date Completed** | **Notes** |
| **1 m Quadrats** |  |  |  |
| **5 m Quadrats** |  |  |  |
| **RPCs** |  |  |  |
| **Band Transects** |  |  |  |
| **Visual Fish Transects** |  |  |  |
| **Roving Diver Fish Count** |  |  |  |
| **Fish Size Frequency** |  |  |  |
| **Site (Video) Documentation** |  |  |  |
| **ARMS** |  |  |  |
| **Non-KFM** |  |  |  |
| **Species List** |  |  |  |

**SIZE FREQUENCY MEASURMENTS:** *Tegula regina* (60) \_\_\_\_\_\_

*Macrocystis pyrifera* (100)

*Tethya aurantia* (60)

*Stylaster californica* (50)

*Lophogorgia chilensis* (60)

*Muricea fruticosa* (60)

*Muricea californica* (60)

*Megathura crenulata* (60)

*Haliotis rufescens* (60)

*Haliotis corrugata* (60)

*Haliotis fulgens* (60)

*Kelletia kelletii* (60)

*Crassadoma gigantea* (60)

*Megastraea undosa* (60)

*Lithopoma gibberosa* (60)

*Lytechinus anamesus* (200)

*Pycnopodia helianthoides* (60)

*S. franciscanus* (200)

*S. purpuratus* (200)

*Patiria miniata* (60)

*Pisaster giganteus* (60)

**Version 1.0 2018**

|  |  |  |
| --- | --- | --- |
| **ABUNDANCE RATINGS** |  |  |
| X = present (no rating given) |  |  |
| 0 = noticeably absent, an effort was made to look for an organism that was not found. | | |
| 1 = rare, few organisms found |  |  |
| 2 = present, organism found in moderate numbers | |  |
| 3 = common, organism found over most of the site or in high density patches | | |
| 4 = abundant, organism present in higher than normal densities | | |
| **NOTES** |  |  |
| j = juvenile |  |  |
| s = shell only |  |  |
| #/j# = (e.g. 2/j3 - adult abundance 2, juvenile abundance 3) | | |

**Algae NOTES:**

**Chlorophyta**

*Codium* spp. *\_\_\_\_\_\_\_\_*

*Derbesia* sp. *\_\_\_\_\_\_\_\_*

*Ulva* spp.  *\_\_\_\_\_\_\_\_*

Other green algae *\_\_\_\_\_\_\_\_*

**Phaeophyta**

*Agarum fimbriatum \_\_\_\_\_\_\_\_*

*Colpomenia* sp. *\_\_\_\_\_\_\_\_*

*Cystoseira* sp. *\_\_\_\_\_\_\_\_*

*Desmarestia* sp. *\_\_\_\_\_\_\_\_*

*Dictyoneuropsis \_\_\_\_\_\_\_\_*

*Dictyota/Pachydictyon\_\_\_\_\_\_\_*

*Dictyopteris* sp. *\_\_\_\_\_\_\_\_*

*Eisenia arborea \_\_\_\_\_\_\_\_*

*Laminaria farlowii \_\_\_\_\_\_\_\_*

*Macrocystis pyrifera \_\_\_\_\_\_\_\_*

*Pterygophora californica\_\_\_\_\_*

*Sargassum muticum \_\_\_\_\_\_\_\_*

*Sargassum horneri* *\_\_\_\_\_\_\_\_*

*Zonaria* sp. *\_\_\_\_\_\_\_\_*

Other brown algae *\_\_\_\_\_\_\_\_*

**Rhodophyta**

*Callophyllis* sp. *\_\_\_\_\_\_\_\_*

*Cryptopleura* spp. *\_\_\_\_\_\_\_\_*

*Gelidium* spp*. \_\_\_\_\_\_\_\_*

*Gigartina* spp*.* *\_\_\_\_\_\_\_\_*

*Laurencia* sp. *\_\_\_\_\_\_\_\_*

*Plocamium* sp. *\_\_\_\_\_\_\_\_*

*Rhodymenia* spp. *\_\_\_\_\_\_\_\_*

Articulated coralline \_*\_\_\_\_\_\_\_*

Encrusting coralline *\_\_\_\_\_\_\_\_*

Other red algae *\_\_\_\_\_\_\_\_*

Misc. plant *\_\_\_\_\_\_\_\_*

Bare rock \_\_\_\_\_\_\_\_

**Version 1.0 2018**

**Misc invert/CNId/SPONGE/Tun**

**PORIFERA NOTES:**Most common misc. invert:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*Haliclona* sp*. \_\_\_\_\_\_*

*Hymenamphiastra cyanocrypta\_\_\_\_*

*Polymastia* spp. *\_\_\_\_\_\_*

*Tethya aurantia \_\_\_\_\_\_*

Other Sponges *\_\_\_\_\_\_*

**ANTHOZOA**

*Anthopleura* spp. *\_\_\_\_\_\_*

*Astrangia lajollaensis \_\_\_\_\_\_*

*Balanophyllia* *elegans \_\_\_\_\_\_*

*Corynactis californica \_\_\_\_\_\_*

*Eugorgia rubens \_\_\_\_\_\_*

*Lophogorgia chilensis \_\_\_\_\_\_*

*Metridium* spp. *\_\_\_\_\_\_*

*Muricea californica \_\_\_\_\_\_*

*Muricea fruticosa \_\_\_\_\_\_*

*Sagartia/Cactosoma* spp. *\_\_\_\_\_\_*

*Urticina lofotensis \_\_\_\_\_\_*

*Urticina* spp. *\_\_\_\_\_\_*

**Hydrozoa**

Hydroid spp. *\_\_\_\_\_\_*

*Stylaster californicus \_\_\_\_\_\_*

**Annelida/Polychaeta**

*Chaetopterus* sp. *\_\_\_\_\_\_*

*Diopatra ornata \_\_\_\_\_\_*

*Dodecaceria* spp *\_\_\_\_\_\_*

*Phragmatopoma californica \_\_\_\_\_\_*

*Salmacina tribranchiata \_\_\_\_\_\_*

*Spirobranchus spinosus \_\_\_\_\_\_*

**Arthropoda/Crustacea**

*Balanus* sp. *\_\_\_\_\_\_*

*Cancer* sp. *\_\_\_\_\_\_*

*Panulirus interruptus \_\_\_\_\_\_*

**Bryozoa**

*Bugula* spp*. \_\_\_\_\_\_*

*Costazia costazii. \_\_\_\_\_\_*

*Watersipora* spp. *\_\_\_\_\_\_*

*Diaperoecia californica \_\_\_\_\_\_ Membranipora* spp. *\_\_\_\_\_\_*

Other Bryozoans *\_\_\_\_\_\_*

**Tunicates** *\_\_\_\_\_\_*

*Styela montereyensis \_\_\_\_\_\_*

**Misc. invertebrates** *\_\_\_\_\_\_*

**Molluscs** **NOTES:**

*Aplysia californica \_\_\_\_\_\_\_*

*Bursa californica* \_\_\_\_\_\_

*Crassadoma gigantea \_\_\_\_\_\_\_*

*Cryptochiton stelleri* \_\_\_\_\_\_

*Cypraea spadicea \_\_\_\_\_\_\_*

*Haliotis assimilis \_\_\_\_\_\_\_*

*Haliotis corrugata* \_\_\_\_\_\_

*Haliotis fulgens \_\_\_\_\_\_\_*

*Haliotis rufescens \_\_\_\_\_\_\_*

*Haliotis sorenseni* \_\_\_\_\_\_

*Kelletia kelletii \_\_\_\_\_\_\_*

*Lithopoma gibberosa* \_\_\_\_\_\_

*Megastraea undosa \_\_\_\_\_\_\_*

*Megathura crenulata \_\_\_\_\_\_\_*

*Octopus* spp. *\_\_\_\_\_\_\_*

*Serpulorbis squamigerus \_\_\_\_\_\_*

*Tegula regina \_\_\_\_\_\_\_*

**Version 1.0 2018**

**ECHINODERMS NOTES:**

*Centrostephanus coronatus \_\_\_\_\_\_*

*Cucumaria* sp. *\_\_\_\_\_\_*

*Dermasterias imbricata \_\_\_\_\_\_*

*Linckia* sp. *\_\_\_\_\_\_*

*Lytechinus anamesus \_\_\_\_\_\_*

*Ophiothrix spiculata \_\_\_\_\_\_*

*Pachythyone rubra \_\_\_\_\_\_*

*Parastichopus californicus \_\_\_\_\_\_*

*Parastichopus parvimensis \_\_\_\_\_\_*

*Patiria miniata \_\_\_\_\_\_*

*Pisaster giganteus \_\_\_\_\_\_*

*Pisaster ochraceus \_\_\_\_\_\_*

*Pycnopodia helianthoides \_\_\_\_\_\_*

*S. purpuratus**\_\_\_\_\_\_*

*S. franciscanus \_\_\_\_\_\_*

**Fish: NOTES:**

*Lythrypnus dalli \_\_\_\_\_\_*

*Coryphopterus nicholsii \_\_\_\_\_\_*

*Alloclinus holderi \_\_\_\_\_\_*

fish observed other than on rdfc or fish transects:

**Comments on ARMS:**

**Comments on Gear / Procedure / Transect/ Misc. obsevations:**

**Version 1.0 2018**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sampling Dates/Cruise#** |  |  | |  |  |
| **Wasting Disease** Urchins:  Stars: |  |  | |  |  |
| **Black Spot Disease** |  |  | |  |  |
| **Lead Line Condition:** |  |  | |  |  |
| **Percent Canopy Cover of**  ***Macrocystis pyrifera*** |  |  | |  |  |
| **Site Status** |  |  | |  |  |
| **# Fishing Lures Found** | **# Fishing Weights Found** | | **Notes:** | | |
| New: Old: | New: Old: | |  | | |

**TEMPERATURE LOGGER:**

|  |  |  |
| --- | --- | --- |
| **Date Deployed** | **Date Retrieved** | **Notes:** |
|  |  | See Temp. logger and site history forms |

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Participants** | **Date Completed** | **Notes** |
| **1 m Quadrats** |  |  |  |
| **5 m Quadrats** |  |  |  |
| **RPCs** |  |  |  |
| **Band Transects** |  |  |  |
| **Visual Fish Transects** |  |  |  |
| **Roving Diver Fish Count** |  |  |  |
| **Fish Size Frequency** |  |  |  |
| **Site (Video) Documentation** |  |  |  |
| **ARMS** |  |  |  |
| **Non-KFM** |  |  |  |
| **Species List** |  |  |  |

**SIZE FREQUENCY MEASURMENTS:** *Tegula regina* (60) \_\_\_\_\_\_

*Macrocystis pyrifera* (100)

*Tethya aurantia* (60)

*Stylaster californica* (50)

*Lophogorgia chilensis* (60)

*Muricea fruticosa* (60)

*Muricea californica* (60)

*Megathura crenulata* (60)

*Haliotis rufescens* (60)

*Haliotis corrugata* (60)

*Haliotis fulgens* (60)

*Kelletia kelletii* (60)

*Crassadoma gigantea* (60)

*Megastraea undosa* (60)

*Lithopoma gibberosa* (60)

*Lytechinus anamesus* (200)

*Pycnopodia helianthoides* (60)

*S. franciscanus* (200)

*S. purpuratus* (200)

*Patiria miniata* (60)

*Pisaster giganteus* (60)

|  |  |  |
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| **ABUNDANCE RATINGS** |  |  |
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| **NOTES** |  |  |
| j = juvenile |  |  |
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| #/j# = (e.g. 2/j3 - adult abundance 2, juvenile abundance 3) | | |

**Algae NOTES:**

**Chlorophyta**

*Codium* spp. *\_\_\_\_\_\_\_\_*

*Derbesia* sp. *\_\_\_\_\_\_\_\_*

*Ulva* spp.  *\_\_\_\_\_\_\_\_*

Other green algae *\_\_\_\_\_\_\_\_*

**Phaeophyta**

*Agarum fimbriatum \_\_\_\_\_\_\_\_*

*Colpomenia* sp. *\_\_\_\_\_\_\_\_*

*Cystoseira* sp. *\_\_\_\_\_\_\_\_*

*Desmarestia* sp. *\_\_\_\_\_\_\_\_*

*Dictyoneuropsis \_\_\_\_\_\_\_\_*

*Dictyota/Pachydictyon\_\_\_\_\_\_\_*

*Dictyopteris* sp. *\_\_\_\_\_\_\_\_*

*Eisenia arborea \_\_\_\_\_\_\_\_*

*Laminaria farlowii \_\_\_\_\_\_\_\_*

*Macrocystis pyrifera \_\_\_\_\_\_\_\_*

*Pterygophora californica\_\_\_\_\_*

*Sargassum muticum \_\_\_\_\_\_\_\_*

*Sargassum horneri* *\_\_\_\_\_\_\_\_*

*Zonaria* sp. *\_\_\_\_\_\_\_\_*

Other brown algae *\_\_\_\_\_\_\_\_*

**Rhodophyta**

*Callophyllis* sp. *\_\_\_\_\_\_\_\_*

*Cryptopleura* spp. *\_\_\_\_\_\_\_\_*

*Gelidium* spp*. \_\_\_\_\_\_\_\_*

*Gigartina* spp*.* *\_\_\_\_\_\_\_\_*

*Laurencia* sp. *\_\_\_\_\_\_\_\_*

*Plocamium* sp. *\_\_\_\_\_\_\_\_*

*Rhodymenia* spp. *\_\_\_\_\_\_\_\_*

Articulated coralline \_*\_\_\_\_\_\_\_*

Encrusting coralline *\_\_\_\_\_\_\_\_*

Other red algae *\_\_\_\_\_\_\_\_*

Misc. plant *\_\_\_\_\_\_\_\_*

Bare rock \_\_\_\_\_\_\_\_

**Version 1.0 2018**

**Misc invert/CNId/SPONGE/Tun**

**PORIFERA NOTES:**Most common misc. invert:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*Haliclona* sp*. \_\_\_\_\_\_*

*Hymenamphiastra cyanocrypta\_\_\_\_*

*Polymastia* spp. *\_\_\_\_\_\_*

*Tethya aurantia \_\_\_\_\_\_*

Other Sponges *\_\_\_\_\_\_*

**ANTHOZOA**

*Anthopleura* spp. *\_\_\_\_\_\_*

*Astrangia lajollaensis \_\_\_\_\_\_*

*Balanophyllia* *elegans \_\_\_\_\_\_*

*Corynactis californica \_\_\_\_\_\_*

*Eugorgia rubens \_\_\_\_\_\_*

*Lophogorgia chilensis \_\_\_\_\_\_*

*Metridium* spp. *\_\_\_\_\_\_*

*Muricea californica \_\_\_\_\_\_*

*Muricea fruticosa \_\_\_\_\_\_*

*Sagartia/Cactosoma* spp. *\_\_\_\_\_\_*

*Urticina lofotensis \_\_\_\_\_\_*

*Urticina* spp. *\_\_\_\_\_\_*

**Hydrozoa**

Hydroid spp. *\_\_\_\_\_\_*

*Stylaster californicus \_\_\_\_\_\_*

**Annelida/Polychaeta**

*Chaetopterus* sp. *\_\_\_\_\_\_*

*Diopatra ornata \_\_\_\_\_\_*

*Dodecaceria* spp *\_\_\_\_\_\_*

*Phragmatopoma californica \_\_\_\_\_\_*

*Salmacina tribranchiata \_\_\_\_\_\_*

*Spirobranchus spinosus \_\_\_\_\_\_*

**Arthropoda/Crustacea**

*Balanus* sp. *\_\_\_\_\_\_*

*Cancer* sp. *\_\_\_\_\_\_*

*Panulirus interruptus \_\_\_\_\_\_*

**Bryozoa**

*Bugula* spp*. \_\_\_\_\_\_*

*Costazia costazii. \_\_\_\_\_\_*

*Watersipora* spp. *\_\_\_\_\_\_*

*Diaperoecia californica \_\_\_\_\_\_ Membranipora* spp. *\_\_\_\_\_\_*

Other Bryozoans *\_\_\_\_\_\_*

**Tunicates** *\_\_\_\_\_\_*

*Styela montereyensis \_\_\_\_\_\_*

**Misc. invertebrates** *\_\_\_\_\_\_*

**Molluscs** **NOTES:**

*Aplysia californica \_\_\_\_\_\_\_*

*Bursa californica* \_\_\_\_\_\_

*Crassadoma gigantea \_\_\_\_\_\_\_*

*Cryptochiton stelleri* \_\_\_\_\_\_

*Cypraea spadicea \_\_\_\_\_\_\_*

*Haliotis assimilis \_\_\_\_\_\_\_*

*Haliotis corrugata* \_\_\_\_\_\_

*Haliotis fulgens \_\_\_\_\_\_\_*

*Haliotis rufescens \_\_\_\_\_\_\_*

*Haliotis sorenseni* \_\_\_\_\_\_

*Kelletia kelletii \_\_\_\_\_\_\_*

*Lithopoma gibberosa* \_\_\_\_\_\_

*Megastraea undosa \_\_\_\_\_\_\_*

*Megathura crenulata \_\_\_\_\_\_\_*

*Octopus* spp. *\_\_\_\_\_\_\_*

*Serpulorbis squamigerus \_\_\_\_\_\_*

*Tegula regina \_\_\_\_\_\_\_*

**Version 1.0 2018**

**ECHINODERMS NOTES:**

*Centrostephanus coronatus \_\_\_\_\_\_*

*Cucumaria* sp. *\_\_\_\_\_\_*

*Dermasterias imbricata \_\_\_\_\_\_*

*Linckia* sp. *\_\_\_\_\_\_*

*Lytechinus anamesus \_\_\_\_\_\_*

*Ophiothrix spiculata \_\_\_\_\_\_*

*Pachythyone rubra \_\_\_\_\_\_*

*Parastichopus californicus \_\_\_\_\_\_*

*Parastichopus parvimensis \_\_\_\_\_\_*

*Patiria miniata \_\_\_\_\_\_*

*Pisaster giganteus \_\_\_\_\_\_*

*Pisaster ochraceus \_\_\_\_\_\_*

*Pycnopodia helianthoides \_\_\_\_\_\_*

*S. purpuratus**\_\_\_\_\_\_*

*S. franciscanus \_\_\_\_\_\_*

**Fish: NOTES:**

*Lythrypnus dalli \_\_\_\_\_\_*

*Coryphopterus nicholsii \_\_\_\_\_\_*

*Alloclinus holderi \_\_\_\_\_\_*

fish observed other than on rdfc or fish transects:

**Comments on ARMS:**

**Comments on Gear / Procedure / Transect/ Misc. obsevations:**

**Version 1.0 2018**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sampling Dates/Cruise#** |  |  | |  |  |
| **Wasting Disease** Urchins:  Stars: |  |  | |  |  |
| **Black Spot Disease** |  |  | |  |  |
| **Lead Line Condition:** |  |  | |  |  |
| **Percent Canopy Cover of**  ***Macrocystis pyrifera*** |  |  | |  |  |
| **Site Status** |  |  | |  |  |
| **# Fishing Lures Found** | **# Fishing Weights Found** | | **Notes:** | | |
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**TEMPERATURE LOGGER:**

|  |  |  |
| --- | --- | --- |
| **Date Deployed** | **Date Retrieved** | **Notes:** |
|  |  | See Temp. logger and site history forms |

|  |  |  |  |
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|  | **Participants** | **Date Completed** | **Notes** |
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| **5 m Quadrats** |  |  |  |
| **RPCs** |  |  |  |
| **Band Transects** |  |  |  |
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| **Roving Diver Fish Count** |  |  |  |
| **Fish Size Frequency** |  |  |  |
| **Site (Video) Documentation** |  |  |  |
| **ARMS** |  |  |  |
| **Non-KFM** |  |  |  |
| **Species List** |  |  |  |

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**Version 1.0 2018**

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| **NOTES** |  |  |
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| #/j# = (e.g. 2/j3 - adult abundance 2, juvenile abundance 3) | | |

**Algae NOTES:**

**Chlorophyta**

*Codium* spp. *\_\_\_\_\_\_\_\_*

*Derbesia* sp. *\_\_\_\_\_\_\_\_*

*Ulva* spp.  *\_\_\_\_\_\_\_\_*

Other green algae *\_\_\_\_\_\_\_\_*

**Phaeophyta**

*Agarum fimbriatum \_\_\_\_\_\_\_\_*

*Colpomenia* sp. *\_\_\_\_\_\_\_\_*

*Cystoseira* sp. *\_\_\_\_\_\_\_\_*

*Desmarestia* sp. *\_\_\_\_\_\_\_\_*

*Dictyoneuropsis \_\_\_\_\_\_\_\_*

*Dictyota/Pachydictyon\_\_\_\_\_\_\_*

*Dictyopteris* sp. *\_\_\_\_\_\_\_\_*

*Eisenia arborea \_\_\_\_\_\_\_\_*

*Laminaria farlowii \_\_\_\_\_\_\_\_*

*Macrocystis pyrifera \_\_\_\_\_\_\_\_*

*Pterygophora californica\_\_\_\_\_*

*Sargassum muticum \_\_\_\_\_\_\_\_*

*Sargassum horneri* *\_\_\_\_\_\_\_\_*

*Zonaria* sp. *\_\_\_\_\_\_\_\_*

Other brown algae *\_\_\_\_\_\_\_\_*

**Rhodophyta**

*Callophyllis* sp. *\_\_\_\_\_\_\_\_*

*Cryptopleura* spp. *\_\_\_\_\_\_\_\_*

*Gelidium* spp*. \_\_\_\_\_\_\_\_*

*Gigartina* spp*.* *\_\_\_\_\_\_\_\_*

*Laurencia* sp. *\_\_\_\_\_\_\_\_*

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Articulated coralline \_*\_\_\_\_\_\_\_*

Encrusting coralline *\_\_\_\_\_\_\_\_*

Other red algae *\_\_\_\_\_\_\_\_*

Misc. plant *\_\_\_\_\_\_\_\_*

Bare rock \_\_\_\_\_\_\_\_

**Version 1.0 2018**

**Misc invert/CNId/SPONGE/Tun**

**PORIFERA NOTES:**Most common misc. invert:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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*Polymastia* spp. *\_\_\_\_\_\_*

*Tethya aurantia \_\_\_\_\_\_*

Other Sponges *\_\_\_\_\_\_*

**ANTHOZOA**

*Anthopleura* spp. *\_\_\_\_\_\_*

*Astrangia lajollaensis \_\_\_\_\_\_*

*Balanophyllia* *elegans \_\_\_\_\_\_*

*Corynactis californica \_\_\_\_\_\_*

*Eugorgia rubens \_\_\_\_\_\_*

*Lophogorgia chilensis \_\_\_\_\_\_*

*Metridium* spp. *\_\_\_\_\_\_*

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**Hydrozoa**

Hydroid spp. *\_\_\_\_\_\_*

*Stylaster californicus \_\_\_\_\_\_*

**Annelida/Polychaeta**

*Chaetopterus* sp. *\_\_\_\_\_\_*

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*Dodecaceria* spp *\_\_\_\_\_\_*

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*Kelletia kelletii \_\_\_\_\_\_\_*

*Lithopoma gibberosa* \_\_\_\_\_\_

*Megastraea undosa \_\_\_\_\_\_\_*

*Megathura crenulata \_\_\_\_\_\_\_*

*Octopus* spp. *\_\_\_\_\_\_\_*

*Serpulorbis squamigerus \_\_\_\_\_\_*

*Tegula regina \_\_\_\_\_\_\_*

**Version 1.0 2018**

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**Version 1.0 2018**

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| **Black Spot Disease** |  |  | |  |  |
| **Lead Line Condition:** |  |  | |  |  |
| **Percent Canopy Cover of**  ***Macrocystis pyrifera*** |  |  | |  |  |
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**TEMPERATURE LOGGER:**

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**Version 1.0 2018**

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*Pterygophora californica\_\_\_\_\_*

*Sargassum muticum \_\_\_\_\_\_\_\_*

*Sargassum horneri* *\_\_\_\_\_\_\_\_*

*Zonaria* sp. *\_\_\_\_\_\_\_\_*

Other brown algae *\_\_\_\_\_\_\_\_*

**Rhodophyta**

*Callophyllis* sp. *\_\_\_\_\_\_\_\_*

*Cryptopleura* spp. *\_\_\_\_\_\_\_\_*

*Gelidium* spp*. \_\_\_\_\_\_\_\_*

*Gigartina* spp*.* *\_\_\_\_\_\_\_\_*

*Laurencia* sp. *\_\_\_\_\_\_\_\_*

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*Rhodymenia* spp. *\_\_\_\_\_\_\_\_*

Articulated coralline \_*\_\_\_\_\_\_\_*

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Misc. plant *\_\_\_\_\_\_\_\_*

Bare rock \_\_\_\_\_\_\_\_

**Version 1.0 2018**

**Misc invert/CNId/SPONGE/Tun**

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Hydroid spp. *\_\_\_\_\_\_*

*Stylaster californicus \_\_\_\_\_\_*

**Annelida/Polychaeta**

*Chaetopterus* sp. *\_\_\_\_\_\_*

*Diopatra ornata \_\_\_\_\_\_*

*Dodecaceria* spp *\_\_\_\_\_\_*

*Phragmatopoma californica \_\_\_\_\_\_*

*Salmacina tribranchiata \_\_\_\_\_\_*

*Spirobranchus spinosus \_\_\_\_\_\_*

**Arthropoda/Crustacea**

*Balanus* sp. *\_\_\_\_\_\_*

*Cancer* sp. *\_\_\_\_\_\_*

*Panulirus interruptus \_\_\_\_\_\_*

**Bryozoa**

*Bugula* spp*. \_\_\_\_\_\_*

*Costazia costazii. \_\_\_\_\_\_*

*Watersipora* spp. *\_\_\_\_\_\_*

*Diaperoecia californica \_\_\_\_\_\_ Membranipora* spp. *\_\_\_\_\_\_*

Other Bryozoans *\_\_\_\_\_\_*

**Tunicates** *\_\_\_\_\_\_*

*Styela montereyensis \_\_\_\_\_\_*

**Misc. invertebrates** *\_\_\_\_\_\_*

**Molluscs** **NOTES:**

*Aplysia californica \_\_\_\_\_\_\_*

*Bursa californica* \_\_\_\_\_\_

*Crassadoma gigantea \_\_\_\_\_\_\_*

*Cryptochiton stelleri* \_\_\_\_\_\_

*Cypraea spadicea \_\_\_\_\_\_\_*

*Haliotis assimilis \_\_\_\_\_\_\_*

*Haliotis corrugata* \_\_\_\_\_\_

*Haliotis fulgens \_\_\_\_\_\_\_*

*Haliotis rufescens \_\_\_\_\_\_\_*

*Haliotis sorenseni* \_\_\_\_\_\_

*Kelletia kelletii \_\_\_\_\_\_\_*

*Lithopoma gibberosa* \_\_\_\_\_\_

*Megastraea undosa \_\_\_\_\_\_\_*

*Megathura crenulata \_\_\_\_\_\_\_*

*Octopus* spp. *\_\_\_\_\_\_\_*

*Serpulorbis squamigerus \_\_\_\_\_\_*

*Tegula regina \_\_\_\_\_\_\_*

**Version 1.0 2018**

**ECHINODERMS NOTES:**

*Centrostephanus coronatus \_\_\_\_\_\_*

*Cucumaria* sp. *\_\_\_\_\_\_*

*Dermasterias imbricata \_\_\_\_\_\_*

*Linckia* sp. *\_\_\_\_\_\_*

*Lytechinus anamesus \_\_\_\_\_\_*

*Ophiothrix spiculata \_\_\_\_\_\_*

*Pachythyone rubra \_\_\_\_\_\_*

*Parastichopus californicus \_\_\_\_\_\_*

*Parastichopus parvimensis \_\_\_\_\_\_*

*Patiria miniata \_\_\_\_\_\_*

*Pisaster giganteus \_\_\_\_\_\_*

*Pisaster ochraceus \_\_\_\_\_\_*

*Pycnopodia helianthoides \_\_\_\_\_\_*

*S. purpuratus**\_\_\_\_\_\_*

*S. franciscanus \_\_\_\_\_\_*

**Fish: NOTES:**

*Lythrypnus dalli \_\_\_\_\_\_*

*Coryphopterus nicholsii \_\_\_\_\_\_*

*Alloclinus holderi \_\_\_\_\_\_*

fish observed other than on rdfc or fish transects:

**Comments on ARMS:**

**Comments on Gear / Procedure / Transect/ Misc. obsevations:**

**Version 1.0 2018**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sampling Dates/Cruise#** |  |  | |  |  |
| **Wasting Disease** Urchins:  Stars: |  |  | |  |  |
| **Black Spot Disease** |  |  | |  |  |
| **Lead Line Condition:** |  |  | |  |  |
| **Percent Canopy Cover of**  ***Macrocystis pyrifera*** |  |  | |  |  |
| **Site Status** |  |  | |  |  |
| **# Fishing Lures Found** | **# Fishing Weights Found** | | **Notes:** | | |
| New: Old: | New: Old: | |  | | |

**TEMPERATURE LOGGER:**

|  |  |  |
| --- | --- | --- |
| **Date Deployed** | **Date Retrieved** | **Notes:** |
|  |  | See Temp. logger and site history forms |

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Participants** | **Date Completed** | **Notes** |
| **1 m Quadrats** |  |  |  |
| **5 m Quadrats** |  |  |  |
| **RPCs** |  |  |  |
| **Band Transects** |  |  |  |
| **Visual Fish Transects** |  |  |  |
| **Roving Diver Fish Count** |  |  |  |
| **Fish Size Frequency** |  |  |  |
| **Site (Video) Documentation** |  |  |  |
| **ARMS** |  |  |  |
| **Non-KFM** |  |  |  |
| **Species List** |  |  |  |

**SIZE FREQUENCY MEASURMENTS:** *Tegula regina* (60) \_\_\_\_\_\_

*Macrocystis pyrifera* (100)

*Tethya aurantia* (60)

*Stylaster californica* (50)

*Lophogorgia chilensis* (60)

*Muricea fruticosa* (60)

*Muricea californica* (60)

*Megathura crenulata* (60)

*Haliotis rufescens* (60)

*Haliotis corrugata* (60)

*Haliotis fulgens* (60)

*Kelletia kelletii* (60)

*Crassadoma gigantea* (60)

*Megastraea undosa* (60)

*Lithopoma gibberosa* (60)

*Lytechinus anamesus* (200)

*Pycnopodia helianthoides* (60)

*S. franciscanus* (200)

*S. purpuratus* (200)

*Patiria miniata* (60)

*Pisaster giganteus* (60)

**Version 1.0 2018**

|  |  |  |
| --- | --- | --- |
| **ABUNDANCE RATINGS** |  |  |
| X = present (no rating given) |  |  |
| 0 = noticeably absent, an effort was made to look for an organism that was not found. | | |
| 1 = rare, few organisms found |  |  |
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| 3 = common, organism found over most of the site or in high density patches | | |
| 4 = abundant, organism present in higher than normal densities | | |
| **NOTES** |  |  |
| j = juvenile |  |  |
| s = shell only |  |  |
| #/j# = (e.g. 2/j3 - adult abundance 2, juvenile abundance 3) | | |

**Algae NOTES:**

**Chlorophyta**

*Codium* spp. *\_\_\_\_\_\_\_\_*

*Derbesia* sp. *\_\_\_\_\_\_\_\_*

*Ulva* spp.  *\_\_\_\_\_\_\_\_*

Other green algae *\_\_\_\_\_\_\_\_*

**Phaeophyta**

*Agarum fimbriatum \_\_\_\_\_\_\_\_*

*Colpomenia* sp. *\_\_\_\_\_\_\_\_*

*Cystoseira* sp. *\_\_\_\_\_\_\_\_*

*Desmarestia* sp. *\_\_\_\_\_\_\_\_*

*Dictyoneuropsis \_\_\_\_\_\_\_\_*

*Dictyota/Pachydictyon\_\_\_\_\_\_\_*

*Dictyopteris* sp. *\_\_\_\_\_\_\_\_*

*Eisenia arborea \_\_\_\_\_\_\_\_*

*Laminaria farlowii \_\_\_\_\_\_\_\_*

*Macrocystis pyrifera \_\_\_\_\_\_\_\_*

*Pterygophora californica\_\_\_\_\_*

*Sargassum muticum \_\_\_\_\_\_\_\_*

*Sargassum horneri* *\_\_\_\_\_\_\_\_*

*Zonaria* sp. *\_\_\_\_\_\_\_\_*

Other brown algae *\_\_\_\_\_\_\_\_*

**Rhodophyta**

*Callophyllis* sp. *\_\_\_\_\_\_\_\_*

*Cryptopleura* spp. *\_\_\_\_\_\_\_\_*

*Gelidium* spp*. \_\_\_\_\_\_\_\_*

*Gigartina* spp*.* *\_\_\_\_\_\_\_\_*

*Laurencia* sp. *\_\_\_\_\_\_\_\_*

*Plocamium* sp. *\_\_\_\_\_\_\_\_*

*Rhodymenia* spp. *\_\_\_\_\_\_\_\_*

Articulated coralline \_*\_\_\_\_\_\_\_*

Encrusting coralline *\_\_\_\_\_\_\_\_*

Other red algae *\_\_\_\_\_\_\_\_*

Misc. plant *\_\_\_\_\_\_\_\_*

Bare rock \_\_\_\_\_\_\_\_

**Version 1.0 2018**

**Misc invert/CNId/SPONGE/Tun**

**PORIFERA NOTES:**Most common misc. invert:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*Haliclona* sp*. \_\_\_\_\_\_*

*Hymenamphiastra cyanocrypta\_\_\_\_*

*Polymastia* spp. *\_\_\_\_\_\_*

*Tethya aurantia \_\_\_\_\_\_*

Other Sponges *\_\_\_\_\_\_*

**ANTHOZOA**

*Anthopleura* spp. *\_\_\_\_\_\_*

*Astrangia lajollaensis \_\_\_\_\_\_*

*Balanophyllia* *elegans \_\_\_\_\_\_*

*Corynactis californica \_\_\_\_\_\_*

*Eugorgia rubens \_\_\_\_\_\_*

*Lophogorgia chilensis \_\_\_\_\_\_*

*Metridium* spp. *\_\_\_\_\_\_*

*Muricea californica \_\_\_\_\_\_*

*Muricea fruticosa \_\_\_\_\_\_*

*Sagartia/Cactosoma* spp. *\_\_\_\_\_\_*

*Urticina lofotensis \_\_\_\_\_\_*

*Urticina* spp. *\_\_\_\_\_\_*

**Hydrozoa**

Hydroid spp. *\_\_\_\_\_\_*

*Stylaster californicus \_\_\_\_\_\_*

**Annelida/Polychaeta**

*Chaetopterus* sp. *\_\_\_\_\_\_*

*Diopatra ornata \_\_\_\_\_\_*

*Dodecaceria* spp *\_\_\_\_\_\_*

*Phragmatopoma californica \_\_\_\_\_\_*

*Salmacina tribranchiata \_\_\_\_\_\_*

*Spirobranchus spinosus \_\_\_\_\_\_*

**Arthropoda/Crustacea**

*Balanus* sp. *\_\_\_\_\_\_*

*Cancer* sp. *\_\_\_\_\_\_*

*Panulirus interruptus \_\_\_\_\_\_*

**Bryozoa**

*Bugula* spp*. \_\_\_\_\_\_*

*Costazia costazii. \_\_\_\_\_\_*

*Watersipora* spp. *\_\_\_\_\_\_*

*Diaperoecia californica \_\_\_\_\_\_ Membranipora* spp. *\_\_\_\_\_\_*

Other Bryozoans *\_\_\_\_\_\_*

**Tunicates** *\_\_\_\_\_\_*

*Styela montereyensis \_\_\_\_\_\_*

**Misc. invertebrates** *\_\_\_\_\_\_*

**Molluscs** **NOTES:**

*Aplysia californica \_\_\_\_\_\_\_*

*Bursa californica* \_\_\_\_\_\_

*Crassadoma gigantea \_\_\_\_\_\_\_*

*Cryptochiton stelleri* \_\_\_\_\_\_

*Cypraea spadicea \_\_\_\_\_\_\_*

*Haliotis assimilis \_\_\_\_\_\_\_*

*Haliotis corrugata* \_\_\_\_\_\_

*Haliotis fulgens \_\_\_\_\_\_\_*

*Haliotis rufescens \_\_\_\_\_\_\_*

*Haliotis sorenseni* \_\_\_\_\_\_

*Kelletia kelletii \_\_\_\_\_\_\_*

*Lithopoma gibberosa* \_\_\_\_\_\_

*Megastraea undosa \_\_\_\_\_\_\_*

*Megathura crenulata \_\_\_\_\_\_\_*

*Octopus* spp. *\_\_\_\_\_\_\_*

*Serpulorbis squamigerus \_\_\_\_\_\_*

*Tegula regina \_\_\_\_\_\_\_*

**Version 1.0 2018**

**ECHINODERMS NOTES:**

*Centrostephanus coronatus \_\_\_\_\_\_*

*Cucumaria* sp. *\_\_\_\_\_\_*

*Dermasterias imbricata \_\_\_\_\_\_*

*Linckia* sp. *\_\_\_\_\_\_*

*Lytechinus anamesus \_\_\_\_\_\_*

*Ophiothrix spiculata \_\_\_\_\_\_*

*Pachythyone rubra \_\_\_\_\_\_*

*Parastichopus californicus \_\_\_\_\_\_*

*Parastichopus parvimensis \_\_\_\_\_\_*

*Patiria miniata \_\_\_\_\_\_*

*Pisaster giganteus \_\_\_\_\_\_*

*Pisaster ochraceus \_\_\_\_\_\_*

*Pycnopodia helianthoides \_\_\_\_\_\_*

*S. purpuratus**\_\_\_\_\_\_*

*S. franciscanus \_\_\_\_\_\_*

**Fish: NOTES:**

*Lythrypnus dalli \_\_\_\_\_\_*

*Coryphopterus nicholsii \_\_\_\_\_\_*

*Alloclinus holderi \_\_\_\_\_\_*

fish observed other than on rdfc or fish transects:

**Comments on ARMS:**

**Comments on Gear / Procedure / Transect/ Misc. obsevations:**

**Version 1.0 2018**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sampling Dates/Cruise#** |  |  | |  |  |
| **Wasting Disease** Urchins:  Stars: |  |  | |  |  |
| **Black Spot Disease** |  |  | |  |  |
| **Lead Line Condition:** |  |  | |  |  |
| **Percent Canopy Cover of**  ***Macrocystis pyrifera*** |  |  | |  |  |
| **Site Status** |  |  | |  |  |
| **# Fishing Lures Found** | **# Fishing Weights Found** | | **Notes:** | | |
| New: Old: | New: Old: | |  | | |

**TEMPERATURE LOGGER:**

|  |  |  |
| --- | --- | --- |
| **Date Deployed** | **Date Retrieved** | **Notes:** |
|  |  | See Temp. logger and site history forms |

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Participants** | **Date Completed** | **Notes** |
| **1 m Quadrats** |  |  |  |
| **5 m Quadrats** |  |  |  |
| **RPCs** |  |  |  |
| **Band Transects** |  |  |  |
| **Visual Fish Transects** |  |  |  |
| **Roving Diver Fish Count** |  |  |  |
| **Fish Size Frequency** |  |  |  |
| **Site (Video) Documentation** |  |  |  |
| **ARMS** |  |  |  |
| **Non-KFM** |  |  |  |
| **Species List** |  |  |  |

**SIZE FREQUENCY MEASURMENTS:** *Tegula regina* (60) \_\_\_\_\_\_

*Macrocystis pyrifera* (100)

*Tethya aurantia* (60)

*Stylaster californica* (50)

*Lophogorgia chilensis* (60)

*Muricea fruticosa* (60)

*Muricea californica* (60)

*Megathura crenulata* (60)

*Haliotis rufescens* (60)

*Haliotis corrugata* (60)

*Haliotis fulgens* (60)

*Kelletia kelletii* (60)

*Crassadoma gigantea* (60)

*Megastraea undosa* (60)

*Lithopoma gibberosa* (60)

*Lytechinus anamesus* (200)

*Pycnopodia helianthoides* (60)

*S. franciscanus* (200)

*S. purpuratus* (200)

*Patiria miniata* (60)

*Pisaster giganteus* (60)

**Version 1.0 2018**

|  |  |  |
| --- | --- | --- |
| **ABUNDANCE RATINGS** |  |  |
| X = present (no rating given) |  |  |
| 0 = noticeably absent, an effort was made to look for an organism that was not found. | | |
| 1 = rare, few organisms found |  |  |
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| 4 = abundant, organism present in higher than normal densities | | |
| **NOTES** |  |  |
| j = juvenile |  |  |
| s = shell only |  |  |
| #/j# = (e.g. 2/j3 - adult abundance 2, juvenile abundance 3) | | |

**Algae NOTES:**

**Chlorophyta**

*Codium* spp. *\_\_\_\_\_\_\_\_*

*Derbesia* sp. *\_\_\_\_\_\_\_\_*

*Ulva* spp.  *\_\_\_\_\_\_\_\_*

Other green algae *\_\_\_\_\_\_\_\_*

**Phaeophyta**

*Agarum fimbriatum \_\_\_\_\_\_\_\_*

*Colpomenia* sp. *\_\_\_\_\_\_\_\_*

*Cystoseira* sp. *\_\_\_\_\_\_\_\_*

*Desmarestia* sp. *\_\_\_\_\_\_\_\_*

*Dictyoneuropsis \_\_\_\_\_\_\_\_*

*Dictyota/Pachydictyon\_\_\_\_\_\_\_*

*Dictyopteris* sp. *\_\_\_\_\_\_\_\_*

*Eisenia arborea \_\_\_\_\_\_\_\_*

*Laminaria farlowii \_\_\_\_\_\_\_\_*

*Macrocystis pyrifera \_\_\_\_\_\_\_\_*

*Pterygophora californica\_\_\_\_\_*

*Sargassum muticum \_\_\_\_\_\_\_\_*

*Sargassum horneri* *\_\_\_\_\_\_\_\_*

*Zonaria* sp. *\_\_\_\_\_\_\_\_*

Other brown algae *\_\_\_\_\_\_\_\_*

**Rhodophyta**

*Callophyllis* sp. *\_\_\_\_\_\_\_\_*

*Cryptopleura* spp. *\_\_\_\_\_\_\_\_*

*Gelidium* spp*. \_\_\_\_\_\_\_\_*

*Gigartina* spp*.* *\_\_\_\_\_\_\_\_*

*Laurencia* sp. *\_\_\_\_\_\_\_\_*

*Plocamium* sp. *\_\_\_\_\_\_\_\_*

*Rhodymenia* spp. *\_\_\_\_\_\_\_\_*

Articulated coralline \_*\_\_\_\_\_\_\_*

Encrusting coralline *\_\_\_\_\_\_\_\_*

Other red algae *\_\_\_\_\_\_\_\_*

Misc. plant *\_\_\_\_\_\_\_\_*

Bare rock \_\_\_\_\_\_\_\_

**Version 1.0 2018**

**Misc invert/CNId/SPONGE/Tun**

**PORIFERA NOTES:**Most common misc. invert:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*Haliclona* sp*. \_\_\_\_\_\_*

*Hymenamphiastra cyanocrypta\_\_\_\_*

*Polymastia* spp. *\_\_\_\_\_\_*

*Tethya aurantia \_\_\_\_\_\_*

Other Sponges *\_\_\_\_\_\_*

**ANTHOZOA**

*Anthopleura* spp. *\_\_\_\_\_\_*

*Astrangia lajollaensis \_\_\_\_\_\_*

*Balanophyllia* *elegans \_\_\_\_\_\_*

*Corynactis californica \_\_\_\_\_\_*

*Eugorgia rubens \_\_\_\_\_\_*

*Lophogorgia chilensis \_\_\_\_\_\_*

*Metridium* spp. *\_\_\_\_\_\_*

*Muricea californica \_\_\_\_\_\_*

*Muricea fruticosa \_\_\_\_\_\_*

*Sagartia/Cactosoma* spp. *\_\_\_\_\_\_*

*Urticina lofotensis \_\_\_\_\_\_*

*Urticina* spp. *\_\_\_\_\_\_*

**Hydrozoa**

Hydroid spp. *\_\_\_\_\_\_*

*Stylaster californicus \_\_\_\_\_\_*

**Annelida/Polychaeta**

*Chaetopterus* sp. *\_\_\_\_\_\_*

*Diopatra ornata \_\_\_\_\_\_*

*Dodecaceria* spp *\_\_\_\_\_\_*

*Phragmatopoma californica \_\_\_\_\_\_*

*Salmacina tribranchiata \_\_\_\_\_\_*

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**Arthropoda/Crustacea**

*Balanus* sp. *\_\_\_\_\_\_*

*Cancer* sp. *\_\_\_\_\_\_*

*Panulirus interruptus \_\_\_\_\_\_*

**Bryozoa**

*Bugula* spp*. \_\_\_\_\_\_*

*Costazia costazii. \_\_\_\_\_\_*

*Watersipora* spp. *\_\_\_\_\_\_*

*Diaperoecia californica \_\_\_\_\_\_ Membranipora* spp. *\_\_\_\_\_\_*

Other Bryozoans *\_\_\_\_\_\_*

**Tunicates** *\_\_\_\_\_\_*

*Styela montereyensis \_\_\_\_\_\_*

**Misc. invertebrates** *\_\_\_\_\_\_*

**Molluscs** **NOTES:**

*Aplysia californica \_\_\_\_\_\_\_*

*Bursa californica* \_\_\_\_\_\_\_

*Crassadoma gigantea \_\_\_\_\_\_\_*

*Cryptochiton stelleri \_*\_\_\_\_\_\_

*Cypraea spadicea \_\_\_\_\_\_\_*

*Haliotis assimilis \_\_\_\_\_\_\_*

*Haliotis corrugata* \_\_\_\_\_\_\_

*Haliotis fulgens \_\_\_\_\_\_\_*

*Haliotis rufescens \_\_\_\_\_\_\_*

*Haliotis sorenseni* \_\_\_\_\_\_\_

*Kelletia kelletii \_\_\_\_\_\_\_*

*Lithopoma gibberosa \_*\_\_\_\_\_\_

*Megastraea undosa \_\_\_\_\_\_\_*

*Megathura crenulata \_\_\_\_\_\_\_*

*Octopus* spp. *\_\_\_\_\_\_\_*

*Serpulorbis squamigerus \_\_\_\_\_\_*

*Tegula regina \_\_\_\_\_\_\_*

**Version 1.0 2018**

**ECHINODERMS NOTES:**

*Centrostephanus coronatus \_\_\_\_\_\_*

*Cucumaria* sp. *\_\_\_\_\_\_*

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*Linckia* sp. *\_\_\_\_\_\_*

*Lytechinus anamesus \_\_\_\_\_\_*

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*S. purpuratus**\_\_\_\_\_\_*

*S. franciscanus \_\_\_\_\_\_*

**Fish: NOTES:**

*Lythrypnus dalli \_\_\_\_\_\_*

*Coryphopterus nicholsii \_\_\_\_\_\_*

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fish observed other than on rdfc or fish transects:

**Comments on ARMS:**

**Comments on Gear / Procedure / Transect/ Misc. obsevations:**

**Version 1.0 2018**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sampling Dates/Cruise#** |  |  | |  |  |
| **Wasting Disease** Urchins:  Stars: |  |  | |  |  |
| **Black Spot Disease** |  |  | |  |  |
| **Lead Line Condition:** |  |  | |  |  |
| **Percent Canopy Cover of**  ***Macrocystis pyrifera*** |  |  | |  |  |
| **Site Status** |  |  | |  |  |
| **# Fishing Lures Found** | **# Fishing Weights Found** | | **Notes:** | | |
| New: Old: | New: Old: | |  | | |

**TEMPERATURE LOGGER:**

|  |  |  |
| --- | --- | --- |
| **Date Deployed** | **Date Retrieved** | **Notes:** |
|  |  | See Temp. logger and site history forms |

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Participants** | **Date Completed** | **Notes** |
| **1 m Quadrats** |  |  |  |
| **5 m Quadrats** |  |  |  |
| **RPCs** |  |  |  |
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| **Roving Diver Fish Count** |  |  |  |
| **Fish Size Frequency** |  |  |  |
| **Site (Video) Documentation** |  |  |  |
| **ARMS** |  |  |  |
| **Non-KFM** |  |  |  |
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**SIZE FREQUENCY MEASURMENTS:** *Tegula regina* (60) \_\_\_\_\_\_

*Macrocystis pyrifera* (100)

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**Version 1.0 2018**

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| 4 = abundant, organism present in higher than normal densities | | |
| **NOTES** |  |  |
| j = juvenile |  |  |
| s = shell only |  |  |
| #/j# = (e.g. 2/j3 - adult abundance 2, juvenile abundance 3) | | |

**Algae NOTES:**

**Chlorophyta**

*Codium* spp. *\_\_\_\_\_\_\_\_*

*Derbesia* sp. *\_\_\_\_\_\_\_\_*

*Ulva* spp.  *\_\_\_\_\_\_\_\_*

Other green algae *\_\_\_\_\_\_\_\_*

**Phaeophyta**

*Agarum fimbriatum \_\_\_\_\_\_\_\_*

*Colpomenia* sp. *\_\_\_\_\_\_\_\_*

*Cystoseira* sp. *\_\_\_\_\_\_\_\_*

*Desmarestia* sp. *\_\_\_\_\_\_\_\_*

*Dictyoneuropsis \_\_\_\_\_\_\_\_*

*Dictyota/Pachydictyon\_\_\_\_\_\_\_*

*Dictyopteris* sp. *\_\_\_\_\_\_\_\_*

*Eisenia arborea \_\_\_\_\_\_\_\_*

*Laminaria farlowii \_\_\_\_\_\_\_\_*

*Macrocystis pyrifera \_\_\_\_\_\_\_\_*

*Pterygophora californica\_\_\_\_\_*

*Sargassum muticum \_\_\_\_\_\_\_\_*

*Sargassum horneri* *\_\_\_\_\_\_\_\_*

*Zonaria* sp. *\_\_\_\_\_\_\_\_*

Other brown algae *\_\_\_\_\_\_\_\_*

**Rhodophyta**

*Callophyllis* sp. *\_\_\_\_\_\_\_\_*

*Cryptopleura* spp. *\_\_\_\_\_\_\_\_*

*Gelidium* spp*. \_\_\_\_\_\_\_\_*

*Gigartina* spp*.* *\_\_\_\_\_\_\_\_*

*Laurencia* sp. *\_\_\_\_\_\_\_\_*

*Plocamium* sp. *\_\_\_\_\_\_\_\_*

*Rhodymenia* spp. *\_\_\_\_\_\_\_\_*

Articulated coralline \_*\_\_\_\_\_\_\_*

Encrusting coralline *\_\_\_\_\_\_\_\_*

Other red algae *\_\_\_\_\_\_\_\_*

Misc. plant *\_\_\_\_\_\_\_\_*

Bare rock \_\_\_\_\_\_\_\_

**Version 1.0 2018**

**Misc invert/CNId/SPONGE/Tun**

**PORIFERA NOTES:**Most common misc. invert:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*Haliclona* sp*. \_\_\_\_\_\_*

*Hymenamphiastra cyanocrypta\_\_\_\_*

*Polymastia* spp. *\_\_\_\_\_\_*

*Tethya aurantia \_\_\_\_\_\_*

Other Sponges *\_\_\_\_\_\_*

**ANTHOZOA**

*Anthopleura* spp. *\_\_\_\_\_\_*

*Astrangia lajollaensis \_\_\_\_\_\_*

*Balanophyllia* *elegans \_\_\_\_\_\_*

*Corynactis californica \_\_\_\_\_\_*

*Eugorgia rubens \_\_\_\_\_\_*

*Lophogorgia chilensis \_\_\_\_\_\_*

*Metridium* spp. *\_\_\_\_\_\_*

*Muricea californica \_\_\_\_\_\_*

*Muricea fruticosa \_\_\_\_\_\_*

*Sagartia/Cactosoma* spp. *\_\_\_\_\_\_*

*Urticina lofotensis \_\_\_\_\_\_*

*Urticina* spp. *\_\_\_\_\_\_*

**Hydrozoa**

Hydroid spp. *\_\_\_\_\_\_*

*Stylaster californicus \_\_\_\_\_\_*

**Annelida/Polychaeta**

*Chaetopterus* sp. *\_\_\_\_\_\_*

*Diopatra ornata \_\_\_\_\_\_*

*Dodecaceria* spp *\_\_\_\_\_\_*

*Phragmatopoma californica \_\_\_\_\_\_*

*Salmacina tribranchiata \_\_\_\_\_\_*

*Spirobranchus spinosus \_\_\_\_\_\_*

**Arthropoda/Crustacea**

*Balanus* sp. *\_\_\_\_\_\_*

*Cancer* sp. *\_\_\_\_\_\_*

*Panulirus interruptus \_\_\_\_\_\_*

**Bryozoa**

*Bugula* spp*. \_\_\_\_\_\_*

*Costazia costazii. \_\_\_\_\_\_*

*Watersipora* spp. *\_\_\_\_\_\_*

*Diaperoecia californica \_\_\_\_\_\_ Membranipora* spp. *\_\_\_\_\_\_*

Other Bryozoans *\_\_\_\_\_\_*

**Tunicates** *\_\_\_\_\_\_*

*Styela montereyensis \_\_\_\_\_\_*

**Misc. invertebrates** *\_\_\_\_\_\_*

**Molluscs** **NOTES:**

*Aplysia californica \_\_\_\_\_\_\_*

*Bursa californica* \_\_\_\_\_\_\_

*Crassadoma gigantea \_\_\_\_\_\_\_*

*Cryptochiton stelleri* \_\_\_\_\_\_\_

*Cypraea spadicea \_\_\_\_\_\_\_*

*Haliotis assimilis \_\_\_\_\_\_\_*

*Haliotis corrugata* \_\_\_\_\_\_\_

*Haliotis fulgens \_\_\_\_\_\_\_*

*Haliotis rufescens \_\_\_\_\_\_\_*

*Haliotis sorenseni* \_\_\_\_\_\_\_

*Kelletia kelletii \_\_\_\_\_\_\_*

*Lithopoma gibberosa* \_\_\_\_\_\_\_

*Megastraea undosa \_\_\_\_\_\_\_*

*Megathura crenulata \_\_\_\_\_\_\_*

*Octopus* spp. *\_\_\_\_\_\_\_*

*Serpulorbis squamigerus \_\_\_\_\_\_*

*Tegula regina \_\_\_\_\_\_\_*

**Version 1.0 2018**

**ECHINODERMS NOTES:**

*Centrostephanus coronatus \_\_\_\_\_\_*

*Cucumaria* sp. *\_\_\_\_\_\_*

*Dermasterias imbricata \_\_\_\_\_\_*

*Linckia* sp. *\_\_\_\_\_\_*

*Lytechinus anamesus \_\_\_\_\_\_*

*Ophiothrix spiculata \_\_\_\_\_\_*

*Pachythyone rubra \_\_\_\_\_\_*

*Parastichopus californicus \_\_\_\_\_\_*

*Parastichopus parvimensis \_\_\_\_\_\_*

*Patiria miniata \_\_\_\_\_\_*

*Pisaster giganteus \_\_\_\_\_\_*

*Pisaster ochraceus \_\_\_\_\_\_*

*Pycnopodia helianthoides \_\_\_\_\_\_*

*S. purpuratus**\_\_\_\_\_\_*

*S. franciscanus \_\_\_\_\_\_*

**Fish: NOTES:**

*Lythrypnus dalli \_\_\_\_\_\_*

*Coryphopterus nicholsii \_\_\_\_\_\_*

*Alloclinus holderi \_\_\_\_\_\_*

fish observed other than on rdfc or fish transects:

**Comments on ARMS:**

**Comments on Gear / Procedure / Transect/ Misc. obsevations:**

**Version 1.0 2018**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sampling Dates/Cruise#** |  |  | |  |  |
| **Wasting Disease** Urchins:  Stars: |  |  | |  |  |
| **Black Spot Disease** |  |  | |  |  |
| **Lead Line Condition:** |  |  | |  |  |
| **Percent Canopy Cover of**  ***Macrocystis pyrifera*** |  |  | |  |  |
| **Site Status** |  |  | |  |  |
| **# Fishing Lures Found** | **# Fishing Weights Found** | | **Notes:** | | |
| New: Old: | New: Old: | |  | | |

**TEMPERATURE LOGGER:**

|  |  |  |
| --- | --- | --- |
| **Date Deployed** | **Date Retrieved** | **Notes:** |
|  |  | See Temp. logger and site history forms |

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Participants** | **Date Completed** | **Notes** |
| **1 m Quadrats** |  |  |  |
| **5 m Quadrats** |  |  |  |
| **RPCs** |  |  |  |
| **Band Transects** |  |  |  |
| **Visual Fish Transects** |  |  |  |
| **Roving Diver Fish Count** |  |  |  |
| **Fish Size Frequency** |  |  |  |
| **Site (Video) Documentation** |  |  |  |
| **ARMS** |  |  |  |
| **Non-KFM** |  |  |  |
| **Species List** |  |  |  |

**SIZE FREQUENCY MEASURMENTS:** *Tegula regina* (60) \_\_\_\_\_\_

*Macrocystis pyrifera* (100)

*Tethya aurantia* (60)

*Stylaster californica* (50)

*Lophogorgia chilensis* (60)

*Muricea fruticosa* (60)

*Muricea californica* (60)

*Megathura crenulata* (60)

*Haliotis rufescens* (60)

*Haliotis corrugata* (60)

*Haliotis fulgens* (60)

*Kelletia kelletii* (60)

*Crassadoma gigantea* (60)

*Megastraea undosa* (60)

*Lithopoma gibberosa* (60)

*Lytechinus anamesus* (200)

*Pycnopodia helianthoides* (60)

*S. franciscanus* (200)

*S. purpuratus* (200)

*Patiria miniata* (60)

*Pisaster giganteus* (60)

**Version 1.0 2018**

|  |  |  |
| --- | --- | --- |
| **ABUNDANCE RATINGS** |  |  |
| X = present (no rating given) |  |  |
| 0 = noticeably absent, an effort was made to look for an organism that was not found. | | |
| 1 = rare, few organisms found |  |  |
| 2 = present, organism found in moderate numbers | |  |
| 3 = common, organism found over most of the site or in high density patches | | |
| 4 = abundant, organism present in higher than normal densities | | |
| **NOTES** |  |  |
| j = juvenile |  |  |
| s = shell only |  |  |
| #/j# = (e.g. 2/j3 - adult abundance 2, juvenile abundance 3) | | |

**Algae NOTES:**

**Chlorophyta**

*Codium* spp. *\_\_\_\_\_\_\_\_*

*Derbesia* sp. *\_\_\_\_\_\_\_\_*

*Ulva* spp.  *\_\_\_\_\_\_\_\_*

Other green algae *\_\_\_\_\_\_\_\_*

**Phaeophyta**

*Agarum fimbriatum \_\_\_\_\_\_\_\_*

*Colpomenia* sp. *\_\_\_\_\_\_\_\_*

*Cystoseira* sp. *\_\_\_\_\_\_\_\_*

*Desmarestia* sp. *\_\_\_\_\_\_\_\_*

*Dictyoneuropsis \_\_\_\_\_\_\_\_*

*Dictyota/Pachydictyon\_\_\_\_\_\_\_*

*Dictyopteris* sp. *\_\_\_\_\_\_\_\_*

*Eisenia arborea \_\_\_\_\_\_\_\_*

*Laminaria farlowii \_\_\_\_\_\_\_\_*

*Macrocystis pyrifera \_\_\_\_\_\_\_\_*

*Pterygophora californica\_\_\_\_\_*

*Sargassum muticum \_\_\_\_\_\_\_\_*

*Sargassum horneri* *\_\_\_\_\_\_\_\_*

*Zonaria* sp. *\_\_\_\_\_\_\_\_*

Other brown algae *\_\_\_\_\_\_\_\_*

**Rhodophyta**

*Callophyllis* sp. *\_\_\_\_\_\_\_\_*

*Cryptopleura* spp. *\_\_\_\_\_\_\_\_*

*Gelidium* spp*. \_\_\_\_\_\_\_\_*

*Gigartina* spp*.* *\_\_\_\_\_\_\_\_*

*Laurencia* sp. *\_\_\_\_\_\_\_\_*

*Plocamium* sp. *\_\_\_\_\_\_\_\_*

*Rhodymenia* spp. *\_\_\_\_\_\_\_\_*

Articulated coralline \_*\_\_\_\_\_\_\_*

Encrusting coralline *\_\_\_\_\_\_\_\_*

Other red algae *\_\_\_\_\_\_\_\_*

Misc. plant *\_\_\_\_\_\_\_\_*

Bare rock \_\_\_\_\_\_\_\_

**Version 1.0 2018**

**Misc invert/CNId/SPONGE/Tun**

**PORIFERA NOTES:**Most common misc. invert:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*Haliclona* sp*. \_\_\_\_\_\_*

*Hymenamphiastra cyanocrypta\_\_\_\_*

*Polymastia* spp. *\_\_\_\_\_\_*

*Tethya aurantia \_\_\_\_\_\_*

Other Sponges *\_\_\_\_\_\_*

**ANTHOZOA**

*Anthopleura* spp. *\_\_\_\_\_\_*

*Astrangia lajollaensis \_\_\_\_\_\_*

*Balanophyllia* *elegans \_\_\_\_\_\_*

*Corynactis californica \_\_\_\_\_\_*

*Eugorgia rubens \_\_\_\_\_\_*

*Lophogorgia chilensis \_\_\_\_\_\_*

*Metridium* spp. *\_\_\_\_\_\_*

*Muricea californica \_\_\_\_\_\_*

*Muricea fruticosa \_\_\_\_\_\_*

*Sagartia/Cactosoma* spp. *\_\_\_\_\_\_*

*Urticina lofotensis \_\_\_\_\_\_*

*Urticina* spp. *\_\_\_\_\_\_*

**Hydrozoa**

Hydroid spp. *\_\_\_\_\_\_*

*Stylaster californicus \_\_\_\_\_\_*

**Annelida/Polychaeta**

*Chaetopterus* sp. *\_\_\_\_\_\_*

*Diopatra ornata \_\_\_\_\_\_*

*Dodecaceria* spp *\_\_\_\_\_\_*

*Phragmatopoma californica \_\_\_\_\_\_*

*Salmacina tribranchiata \_\_\_\_\_\_*

*Spirobranchus spinosus \_\_\_\_\_\_*

**Arthropoda/Crustacea**

*Balanus* sp. *\_\_\_\_\_\_*

*Cancer* sp. *\_\_\_\_\_\_*

*Panulirus interruptus \_\_\_\_\_\_*

**Bryozoa**

*Bugula* spp*. \_\_\_\_\_\_*

*Costazia costazii. \_\_\_\_\_\_*

*Watersipora* spp. *\_\_\_\_\_\_*

*Diaperoecia californica \_\_\_\_\_\_ Membranipora* spp. *\_\_\_\_\_\_*

Other Bryozoans *\_\_\_\_\_\_*

**Tunicates** *\_\_\_\_\_\_*

*Styela montereyensis \_\_\_\_\_\_*

**Misc. invertebrates** *\_\_\_\_\_\_*

**Molluscs** **NOTES:**

*Aplysia californica \_\_\_\_\_\_\_*

*Bursa californica* \_\_\_\_\_\_\_

*Crassadoma gigantea \_\_\_\_\_\_\_*

*Cryptochiton stelleri* \_\_\_\_\_\_\_

*Cypraea spadicea \_\_\_\_\_\_\_*

*Haliotis assimilis \_\_\_\_\_\_\_*

*Haliotis corrugata* \_\_\_\_\_\_\_

*Haliotis fulgens \_\_\_\_\_\_\_*

*Haliotis rufescens \_\_\_\_\_\_\_*

*Haliotis sorenseni* \_\_\_\_\_\_\_

*Kelletia kelletii \_\_\_\_\_\_\_*

*Lithopoma gibberosa* \_\_\_\_\_\_\_

*Megastraea undosa \_\_\_\_\_\_\_*

*Megathura crenulata \_\_\_\_\_\_\_*

*Octopus* spp. *\_\_\_\_\_\_\_*

*Serpulorbis squamigerus \_\_\_\_\_\_*

*Tegula regina \_\_\_\_\_\_\_*

**Version 1.0 2018**

**ECHINODERMS NOTES:**

*Centrostephanus coronatus \_\_\_\_\_\_*

*Cucumaria* sp. *\_\_\_\_\_\_*

*Dermasterias imbricata \_\_\_\_\_\_*

*Linckia* sp. *\_\_\_\_\_\_*

*Lytechinus anamesus \_\_\_\_\_\_*

*Ophiothrix spiculata \_\_\_\_\_\_*

*Pachythyone rubra \_\_\_\_\_\_*

*Parastichopus californicus \_\_\_\_\_\_*

*Parastichopus parvimensis \_\_\_\_\_\_*

*Patiria miniata \_\_\_\_\_\_*

*Pisaster giganteus \_\_\_\_\_\_*

*Pisaster ochraceus \_\_\_\_\_\_*

*Pycnopodia helianthoides \_\_\_\_\_\_*

*S. purpuratus**\_\_\_\_\_\_*

*S. franciscanus \_\_\_\_\_\_*

**Fish: NOTES:**

*Lythrypnus dalli \_\_\_\_\_\_*

*Coryphopterus nicholsii \_\_\_\_\_\_*

*Alloclinus holderi \_\_\_\_\_\_*

fish observed other than on rdfc or fish transects:

**Comments on ARMS:**

**Comments on Gear / Procedure / Transect/ Misc. obsevations:**

**Version 1.0 2018**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sampling Dates/Cruise#** |  |  | |  |  |
| **Wasting Disease** Urchins:  Stars: |  |  | |  |  |
| **Black Spot Disease** |  |  | |  |  |
| **Lead Line Condition:** |  |  | |  |  |
| **Percent Canopy Cover of**  ***Macrocystis pyrifera*** |  |  | |  |  |
| **Site Status** |  |  | |  |  |
| **# Fishing Lures Found** | **# Fishing Weights Found** | | **Notes:** | | |
| New: Old: | New: Old: | |  | | |

**TEMPERATURE LOGGER:**

|  |  |  |
| --- | --- | --- |
| **Date Deployed** | **Date Retrieved** | **Notes:** |
|  |  | See Temp. logger and site history forms |

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Participants** | **Date Completed** | **Notes** |
| **1 m Quadrats** |  |  |  |
| **5 m Quadrats** |  |  |  |
| **RPCs** |  |  |  |
| **Band Transects** |  |  |  |
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| **Roving Diver Fish Count** |  |  |  |
| **Fish Size Frequency** |  |  |  |
| **Site (Video) Documentation** |  |  |  |
| **ARMS** |  |  |  |
| **Non-KFM** |  |  |  |
| **Species List** |  |  |  |

**SIZE FREQUENCY MEASURMENTS:** *Tegula regina* (60) \_\_\_\_\_\_

*Macrocystis pyrifera* (100)

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*Muricea californica* (60)

*Megathura crenulata* (60)

*Haliotis rufescens* (60)

*Haliotis corrugata* (60)

*Haliotis fulgens* (60)

*Kelletia kelletii* (60)

*Crassadoma gigantea* (60)

*Megastraea undosa* (60)

*Lithopoma gibberosa* (60)

*Lytechinus anamesus* (200)

*Pycnopodia helianthoides* (60)

*S. franciscanus* (200)

*S. purpuratus* (200)

*Patiria miniata* (60)

*Pisaster giganteus* (60)

**Version 1.0 2018**

|  |  |  |
| --- | --- | --- |
| **ABUNDANCE RATINGS** |  |  |
| X = present (no rating given) |  |  |
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| **NOTES** |  |  |
| j = juvenile |  |  |
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| #/j# = (e.g. 2/j3 - adult abundance 2, juvenile abundance 3) | | |

**Algae NOTES:**

**Chlorophyta**

*Codium* spp. *\_\_\_\_\_\_\_\_*

*Derbesia* sp. *\_\_\_\_\_\_\_\_*

*Ulva* spp.  *\_\_\_\_\_\_\_\_*

Other green algae *\_\_\_\_\_\_\_\_*

**Phaeophyta**

*Agarum fimbriatum \_\_\_\_\_\_\_\_*

*Colpomenia* sp. *\_\_\_\_\_\_\_\_*

*Cystoseira* sp. *\_\_\_\_\_\_\_\_*

*Desmarestia* sp. *\_\_\_\_\_\_\_\_*

*Dictyoneuropsis \_\_\_\_\_\_\_\_*

*Dictyota/Pachydictyon\_\_\_\_\_\_\_*

*Dictyopteris* sp. *\_\_\_\_\_\_\_\_*

*Eisenia arborea \_\_\_\_\_\_\_\_*

*Laminaria farlowii \_\_\_\_\_\_\_\_*

*Macrocystis pyrifera \_\_\_\_\_\_\_\_*

*Pterygophora californica\_\_\_\_\_*

*Sargassum muticum \_\_\_\_\_\_\_\_*

*Sargassum horneri* *\_\_\_\_\_\_\_\_*

*Zonaria* sp. *\_\_\_\_\_\_\_\_*

Other brown algae *\_\_\_\_\_\_\_\_*

**Rhodophyta**

*Callophyllis* sp. *\_\_\_\_\_\_\_\_*

*Cryptopleura* spp. *\_\_\_\_\_\_\_\_*

*Gelidium* spp*. \_\_\_\_\_\_\_\_*

*Gigartina* spp*.* *\_\_\_\_\_\_\_\_*

*Laurencia* sp. *\_\_\_\_\_\_\_\_*

*Plocamium* sp. *\_\_\_\_\_\_\_\_*

*Rhodymenia* spp. *\_\_\_\_\_\_\_\_*

Articulated coralline \_*\_\_\_\_\_\_\_*

Encrusting coralline *\_\_\_\_\_\_\_\_*

Other red algae *\_\_\_\_\_\_\_\_*

Misc. plant *\_\_\_\_\_\_\_\_*

Bare rock \_\_\_\_\_\_\_\_

**Version 1.0 2018**

**Misc invert/CNId/SPONGE/Tun**

**PORIFERA NOTES:**Most common misc. invert:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*Haliclona* sp*. \_\_\_\_\_\_*

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Other Sponges *\_\_\_\_\_\_*

**ANTHOZOA**

*Anthopleura* spp. *\_\_\_\_\_\_*

*Astrangia lajollaensis \_\_\_\_\_\_*

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*Lophogorgia chilensis \_\_\_\_\_\_*

*Metridium* spp. *\_\_\_\_\_\_*

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*Muricea fruticosa \_\_\_\_\_\_*

*Sagartia/Cactosoma* spp. *\_\_\_\_\_\_*

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*Urticina* spp. *\_\_\_\_\_\_*

**Hydrozoa**

Hydroid spp. *\_\_\_\_\_\_*

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*Chaetopterus* sp. *\_\_\_\_\_\_*

*Diopatra ornata \_\_\_\_\_\_*

*Dodecaceria* spp *\_\_\_\_\_\_*

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*Balanus* sp. *\_\_\_\_\_\_*

*Cancer* sp. *\_\_\_\_\_\_*

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**Bryozoa**

*Bugula* spp*. \_\_\_\_\_\_*

*Costazia costazii. \_\_\_\_\_\_*

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Other Bryozoans *\_\_\_\_\_\_*

**Tunicates** *\_\_\_\_\_\_*

*Styela montereyensis \_\_\_\_\_\_*

**Misc. invertebrates** *\_\_\_\_\_\_*

**Molluscs** **NOTES:**

*Aplysia californica \_\_\_\_\_\_\_*

*Bursa californica* \_\_\_\_\_\_\_

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*Cryptochiton stelleri* \_\_\_\_\_\_\_

*Cypraea spadicea \_\_\_\_\_\_\_*

*Haliotis assimilis \_\_\_\_\_\_\_*

*Haliotis corrugata* \_\_\_\_\_\_\_

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*Haliotis sorenseni* \_\_\_\_\_\_\_

*Kelletia kelletii \_\_\_\_\_\_\_*

*Lithopoma gibberosa* \_\_\_\_\_\_\_

*Megastraea undosa \_\_\_\_\_\_\_*

*Megathura crenulata \_\_\_\_\_\_\_*

*Octopus* spp. *\_\_\_\_\_\_\_*

*Serpulorbis squamigerus \_\_\_\_\_\_*

*Tegula regina \_\_\_\_\_\_\_*

**Version 1.0 2018**

**ECHINODERMS NOTES:**

*Centrostephanus coronatus \_\_\_\_\_\_*

*Cucumaria* sp. *\_\_\_\_\_\_*

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*S. purpuratus**\_\_\_\_\_\_*

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**Fish: NOTES:**

*Lythrypnus dalli \_\_\_\_\_\_*

*Coryphopterus nicholsii \_\_\_\_\_\_*

*Alloclinus holderi \_\_\_\_\_\_*

fish observed other than on rdfc or fish transects:

**Comments on ARMS:**

**Comments on Gear / Procedure / Transect/ Misc. obsevations:**

**Version 1.0 2018**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sampling Dates/Cruise#** |  |  | |  |  |
| **Wasting Disease** Urchins:  Stars: |  |  | |  |  |
| **Black Spot Disease** |  |  | |  |  |
| **Lead Line Condition:** |  |  | |  |  |
| **Percent Canopy Cover of**  ***Macrocystis pyrifera*** |  |  | |  |  |
| **Site Status** |  |  | |  |  |
| **# Fishing Lures Found** | **# Fishing Weights Found** | | **Notes:** | | |
| New: Old: | New: Old: | |  | | |

**TEMPERATURE LOGGER:**

|  |  |  |
| --- | --- | --- |
| **Date Deployed** | **Date Retrieved** | **Notes:** |
|  |  | See Temp. logger and site history forms |

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Participants** | **Date Completed** | **Notes** |
| **1 m Quadrats** |  |  |  |
| **5 m Quadrats** |  |  |  |
| **RPCs** |  |  |  |
| **Band Transects** |  |  |  |
| **Visual Fish Transects** |  |  |  |
| **Roving Diver Fish Count** |  |  |  |
| **Fish Size Frequency** |  |  |  |
| **Site (Video) Documentation** |  |  |  |
| **ARMS** |  |  |  |
| **Non-KFM** |  |  |  |
| **Species List** |  |  |  |

**SIZE FREQUENCY MEASURMENTS:** *Tegula regina* (60) \_\_\_\_\_\_

*Macrocystis pyrifera* (100)

*Tethya aurantia* (60)

*Stylaster californica* (50)

*Lophogorgia chilensis* (60)

*Muricea fruticosa* (60)

*Muricea californica* (60)

*Megathura crenulata* (60)

*Haliotis rufescens* (60)

*Haliotis corrugata* (60)

*Haliotis fulgens* (60)

*Kelletia kelletii* (60)

*Crassadoma gigantea* (60)

*Megastraea undosa* (60)

*Lithopoma gibberosa* (60)

*Lytechinus anamesus* (200)

*Pycnopodia helianthoides* (60)

*S. franciscanus* (200)

*S. purpuratus* (200)

*Patiria miniata* (60)

*Pisaster giganteus* (60)

**Version 1.0 2018**

|  |  |  |
| --- | --- | --- |
| **ABUNDANCE RATINGS** |  |  |
| X = present (no rating given) |  |  |
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| **NOTES** |  |  |
| j = juvenile |  |  |
| s = shell only |  |  |
| #/j# = (e.g. 2/j3 - adult abundance 2, juvenile abundance 3) | | |

**Algae NOTES:**

**Chlorophyta**

*Codium* spp. *\_\_\_\_\_\_\_\_*

*Derbesia* sp. *\_\_\_\_\_\_\_\_*

*Ulva* spp.  *\_\_\_\_\_\_\_\_*

Other green algae *\_\_\_\_\_\_\_\_*

**Phaeophyta**

*Agarum fimbriatum \_\_\_\_\_\_\_\_*

*Colpomenia* sp. *\_\_\_\_\_\_\_\_*

*Cystoseira* sp. *\_\_\_\_\_\_\_\_*

*Desmarestia* sp. *\_\_\_\_\_\_\_\_*

*Dictyoneuropsis \_\_\_\_\_\_\_\_*

*Dictyota/Pachydictyon\_\_\_\_\_\_\_*

*Dictyopteris* sp. *\_\_\_\_\_\_\_\_*

*Eisenia arborea \_\_\_\_\_\_\_\_*

*Laminaria farlowii \_\_\_\_\_\_\_\_*

*Macrocystis pyrifera \_\_\_\_\_\_\_\_*

*Pterygophora californica\_\_\_\_\_*

*Sargassum muticum \_\_\_\_\_\_\_\_*

*Sargassum horneri* *\_\_\_\_\_\_\_\_*

*Zonaria* sp. *\_\_\_\_\_\_\_\_*

Other brown algae *\_\_\_\_\_\_\_\_*

**Rhodophyta**

*Callophyllis* sp. *\_\_\_\_\_\_\_\_*

*Cryptopleura* spp. *\_\_\_\_\_\_\_\_*

*Gelidium* spp*. \_\_\_\_\_\_\_\_*

*Gigartina* spp*.* *\_\_\_\_\_\_\_\_*

*Laurencia* sp. *\_\_\_\_\_\_\_\_*

*Plocamium* sp. *\_\_\_\_\_\_\_\_*

*Rhodymenia* spp. *\_\_\_\_\_\_\_\_*

Articulated coralline \_*\_\_\_\_\_\_\_*

Encrusting coralline *\_\_\_\_\_\_\_\_*

Other red algae *\_\_\_\_\_\_\_\_*

Misc. plant *\_\_\_\_\_\_\_\_*

Bare rock \_\_\_\_\_\_\_\_

**Version 1.0 2018**

**Misc invert/CNId/SPONGE/Tun**

**PORIFERA NOTES:**Most common misc. invert:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*Haliclona* sp*. \_\_\_\_\_\_*

*Hymenamphiastra cyanocrypta\_\_\_\_*

*Polymastia* spp. *\_\_\_\_\_\_*

*Tethya aurantia \_\_\_\_\_\_*

Other Sponges *\_\_\_\_\_\_*

**ANTHOZOA**

*Anthopleura* spp. *\_\_\_\_\_\_*

*Astrangia lajollaensis \_\_\_\_\_\_*

*Balanophyllia* *elegans \_\_\_\_\_\_*

*Corynactis californica \_\_\_\_\_\_*

*Eugorgia rubens \_\_\_\_\_\_*

*Lophogorgia chilensis \_\_\_\_\_\_*

*Metridium* spp. *\_\_\_\_\_\_*

*Muricea californica \_\_\_\_\_\_*

*Muricea fruticosa \_\_\_\_\_\_*

*Sagartia/Cactosoma* spp. *\_\_\_\_\_\_*

*Urticina lofotensis \_\_\_\_\_\_*

*Urticina* spp. *\_\_\_\_\_\_*

**Hydrozoa**

Hydroid spp. *\_\_\_\_\_\_*

*Stylaster californicus \_\_\_\_\_\_*

**Annelida/Polychaeta**

*Chaetopterus* sp. *\_\_\_\_\_\_*

*Diopatra ornata \_\_\_\_\_\_*

*Dodecaceria* spp *\_\_\_\_\_\_*

*Phragmatopoma californica \_\_\_\_\_\_*

*Salmacina tribranchiata \_\_\_\_\_\_*

*Spirobranchus spinosus \_\_\_\_\_\_*

**Arthropoda/Crustacea**

*Balanus* sp. *\_\_\_\_\_\_*

*Cancer* sp. *\_\_\_\_\_\_*

*Panulirus interruptus \_\_\_\_\_\_*

**Bryozoa**

*Bugula* spp*. \_\_\_\_\_\_*

*Costazia costazii. \_\_\_\_\_\_*

*Watersipora* spp. *\_\_\_\_\_\_*

*Diaperoecia californica \_\_\_\_\_\_ Membranipora* spp. *\_\_\_\_\_\_*

Other Bryozoans *\_\_\_\_\_\_*

**Tunicates** *\_\_\_\_\_\_*

*Styela montereyensis \_\_\_\_\_\_*

**Misc. invertebrates** *\_\_\_\_\_\_*

**Molluscs** **NOTES:**

*Aplysia californica \_\_\_\_\_\_\_*

*Bursa californica* \_\_\_\_\_\_\_

*Crassadoma gigantea \_\_\_\_\_\_\_*

*Cryptochiton stelleri* \_\_\_\_\_\_\_

*Cypraea spadicea \_\_\_\_\_\_\_*

*Haliotis assimilis \_\_\_\_\_\_\_*

*Haliotis corrugata* \_\_\_\_\_\_\_

*Haliotis fulgens \_\_\_\_\_\_\_*

*Haliotis rufescens \_\_\_\_\_\_\_*

*Haliotis sorenseni* \_\_\_\_\_\_\_

*Kelletia kelletii \_\_\_\_\_\_\_*

*Lithopoma gibberosa* \_\_\_\_\_\_\_

*Megastraea undosa \_\_\_\_\_\_\_*

*Megathura crenulata \_\_\_\_\_\_\_*

*Octopus* spp. *\_\_\_\_\_\_\_*

*Serpulorbis squamigerus \_\_\_\_\_\_*

*Tegula regina \_\_\_\_\_\_\_*

**Version 1.0 2018**

**ECHINODERMS NOTES:**

*Centrostephanus coronatus \_\_\_\_\_\_*

*Cucumaria* sp. *\_\_\_\_\_\_*

*Dermasterias imbricata \_\_\_\_\_\_*

*Linckia* sp. *\_\_\_\_\_\_*

*Lytechinus anamesus \_\_\_\_\_\_*

*Ophiothrix spiculata \_\_\_\_\_\_*

*Pachythyone rubra \_\_\_\_\_\_*

*Parastichopus californicus \_\_\_\_\_\_*

*Parastichopus parvimensis \_\_\_\_\_\_*

*Patiria miniata \_\_\_\_\_\_*

*Pisaster giganteus \_\_\_\_\_\_*

*Pisaster ochraceus \_\_\_\_\_\_*

*Pycnopodia helianthoides \_\_\_\_\_\_*

*S. purpuratus**\_\_\_\_\_\_*

*S. franciscanus \_\_\_\_\_\_*

**Fish: NOTES:**

*Lythrypnus dalli \_\_\_\_\_\_*

*Coryphopterus nicholsii \_\_\_\_\_\_*

*Alloclinus holderi \_\_\_\_\_\_*

fish observed other than on rdfc or fish transects:

**Comments on ARMS:**

**Comments on Gear / Procedure / Transect/ Misc. obsevations:**

**Version 1.0 2018**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sampling Dates/Cruise#** |  |  | |  |  |
| **Wasting Disease** Urchins:  Stars: |  |  | |  |  |
| **Black Spot Disease** |  |  | |  |  |
| **Lead Line Condition:** |  |  | |  |  |
| **Percent Canopy Cover of**  ***Macrocystis pyrifera*** |  |  | |  |  |
| **Site Status** |  |  | |  |  |
| **# Fishing Lures Found** | **# Fishing Weights Found** | | **Notes:** | | |
| New: Old: | New: Old: | |  | | |

**TEMPERATURE LOGGER:**

|  |  |  |
| --- | --- | --- |
| **Date Deployed** | **Date Retrieved** | **Notes:** |
|  |  | See Temp. logger and site history forms |

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Participants** | **Date Completed** | **Notes** |
| **1 m Quadrats** |  |  |  |
| **5 m Quadrats** |  |  |  |
| **RPCs** |  |  |  |
| **Band Transects** |  |  |  |
| **Visual Fish Transects** |  |  |  |
| **Roving Diver Fish Count** |  |  |  |
| **Fish Size Frequency** |  |  |  |
| **Site (Video) Documentation** |  |  |  |
| **ARMS** |  |  |  |
| **Non-KFM** |  |  |  |
| **Species List** |  |  |  |

**SIZE FREQUENCY MEASURMENTS:** *Tegula regina* (60) \_\_\_\_\_\_

*Macrocystis pyrifera* (100)

*Tethya aurantia* (60)

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*Lophogorgia chilensis* (60)

*Muricea fruticosa* (60)

*Muricea californica* (60)

*Megathura crenulata* (60)

*Haliotis rufescens* (60)

*Haliotis corrugata* (60)

*Haliotis fulgens* (60)

*Kelletia kelletii* (60)

*Crassadoma gigantea* (60)

*Megastraea undosa* (60)

*Lithopoma gibberosa* (60)

*Lytechinus anamesus* (200)

*Pycnopodia helianthoides* (60)

*S. franciscanus* (200)

*S. purpuratus* (200)

*Patiria miniata* (60)

*Pisaster giganteus* (60)

**Version 1.0 2018**

|  |  |  |
| --- | --- | --- |
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| X = present (no rating given) |  |  |
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| **NOTES** |  |  |
| j = juvenile |  |  |
| s = shell only |  |  |
| #/j# = (e.g. 2/j3 - adult abundance 2, juvenile abundance 3) | | |

**Algae NOTES:**

**Chlorophyta**

*Codium* spp. *\_\_\_\_\_\_\_\_*

*Derbesia* sp. *\_\_\_\_\_\_\_\_*

*Ulva* spp.  *\_\_\_\_\_\_\_\_*

Other green algae *\_\_\_\_\_\_\_\_*

**Phaeophyta**

*Agarum fimbriatum \_\_\_\_\_\_\_\_*

*Colpomenia* sp. *\_\_\_\_\_\_\_\_*

*Cystoseira* sp. *\_\_\_\_\_\_\_\_*

*Desmarestia* sp. *\_\_\_\_\_\_\_\_*

*Dictyoneuropsis \_\_\_\_\_\_\_\_*

*Dictyota/Pachydictyon\_\_\_\_\_\_\_*

*Dictyopteris* sp. *\_\_\_\_\_\_\_\_*

*Eisenia arborea \_\_\_\_\_\_\_\_*

*Laminaria farlowii \_\_\_\_\_\_\_\_*

*Macrocystis pyrifera \_\_\_\_\_\_\_\_*

*Pterygophora californica\_\_\_\_\_*

*Sargassum muticum \_\_\_\_\_\_\_\_*

*Sargassum horneri* *\_\_\_\_\_\_\_\_*

*Zonaria* sp. *\_\_\_\_\_\_\_\_*

Other brown algae *\_\_\_\_\_\_\_\_*

**Rhodophyta**

*Callophyllis* sp. *\_\_\_\_\_\_\_\_*

*Cryptopleura* spp. *\_\_\_\_\_\_\_\_*

*Gelidium* spp*. \_\_\_\_\_\_\_\_*

*Gigartina* spp*.* *\_\_\_\_\_\_\_\_*

*Laurencia* sp. *\_\_\_\_\_\_\_\_*

*Plocamium* sp. *\_\_\_\_\_\_\_\_*

*Rhodymenia* spp. *\_\_\_\_\_\_\_\_*

Articulated coralline \_*\_\_\_\_\_\_\_*

Encrusting coralline *\_\_\_\_\_\_\_\_*

Other red algae *\_\_\_\_\_\_\_\_*

Misc. plant *\_\_\_\_\_\_\_\_*

Bare rock \_\_\_\_\_\_\_\_

**Version 1.0 2018**

**Misc invert/CNId/SPONGE/Tun**

**PORIFERA NOTES:**Most common misc. invert:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*Haliclona* sp*. \_\_\_\_\_\_*

*Hymenamphiastra cyanocrypta\_\_\_\_*

*Polymastia* spp. *\_\_\_\_\_\_*

*Tethya aurantia \_\_\_\_\_\_*

Other Sponges *\_\_\_\_\_\_*

**ANTHOZOA**

*Anthopleura* spp. *\_\_\_\_\_\_*

*Astrangia lajollaensis \_\_\_\_\_\_*

*Balanophyllia* *elegans \_\_\_\_\_\_*

*Corynactis californica \_\_\_\_\_\_*

*Eugorgia rubens \_\_\_\_\_\_*

*Lophogorgia chilensis \_\_\_\_\_\_*

*Metridium* spp. *\_\_\_\_\_\_*

*Muricea californica \_\_\_\_\_\_*

*Muricea fruticosa \_\_\_\_\_\_*

*Sagartia/Cactosoma* spp. *\_\_\_\_\_\_*

*Urticina lofotensis \_\_\_\_\_\_*

*Urticina* spp. *\_\_\_\_\_\_*

**Hydrozoa**

Hydroid spp. *\_\_\_\_\_\_*

*Stylaster californicus \_\_\_\_\_\_*

**Annelida/Polychaeta**

*Chaetopterus* sp. *\_\_\_\_\_\_*

*Diopatra ornata \_\_\_\_\_\_*

*Dodecaceria* spp *\_\_\_\_\_\_*

*Phragmatopoma californica \_\_\_\_\_\_*

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*Balanus* sp. *\_\_\_\_\_\_*

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*Bugula* spp*. \_\_\_\_\_\_*

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Other Bryozoans *\_\_\_\_\_\_*

**Tunicates** *\_\_\_\_\_\_*

*Styela montereyensis \_\_\_\_\_\_*

**Misc. invertebrates** *\_\_\_\_\_\_*

**Molluscs** **NOTES:**

*Aplysia californica \_\_\_\_\_\_\_*

*Bursa californica* \_\_\_\_\_\_\_

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*Cypraea spadicea \_\_\_\_\_\_\_*

*Haliotis assimilis \_\_\_\_\_\_\_*

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*Haliotis rufescens \_\_\_\_\_\_\_*

*Haliotis sorenseni* \_\_\_\_\_\_\_

*Kelletia kelletii \_\_\_\_\_\_\_*

*Lithopoma gibberosa* \_\_\_\_\_\_\_

*Megastraea undosa \_\_\_\_\_\_\_*

*Megathura crenulata \_\_\_\_\_\_\_*

*Octopus* spp. *\_\_\_\_\_\_\_*

*Serpulorbis squamigerus \_\_\_\_\_\_*

*Tegula regina \_\_\_\_\_\_\_*

**Version 1.0 2018**

**ECHINODERMS NOTES:**

*Centrostephanus coronatus \_\_\_\_\_\_*

*Cucumaria* sp. *\_\_\_\_\_\_*

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*Linckia* sp. *\_\_\_\_\_\_*

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*Parastichopus californicus \_\_\_\_\_\_*

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**Version 1.0 2018**

|  |  |  |  |  |  |
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| **Sampling Dates/Cruise#** |  |  | |  |  |
| **Wasting Disease** Urchins:  Stars: |  |  | |  |  |
| **Black Spot Disease** |  |  | |  |  |
| **Lead Line Condition:** |  |  | |  |  |
| **Percent Canopy Cover of**  ***Macrocystis pyrifera*** |  |  | |  |  |
| **Site Status** |  |  | |  |  |
| **# Fishing Lures Found** | **# Fishing Weights Found** | | **Notes:** | | |
| New: Old: | New: Old: | |  | | |

**TEMPERATURE LOGGER:**

|  |  |  |
| --- | --- | --- |
| **Date Deployed** | **Date Retrieved** | **Notes:** |
|  |  | See Temp. logger and site history forms |

|  |  |  |  |
| --- | --- | --- | --- |
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| **1 m Quadrats** |  |  |  |
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| **ARMS** |  |  |  |
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**Version 1.0 2018**

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Other green algae *\_\_\_\_\_\_\_\_*

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*Dictyoneuropsis \_\_\_\_\_\_\_\_*

*Dictyota/Pachydictyon\_\_\_\_\_\_\_*

*Dictyopteris* sp. *\_\_\_\_\_\_\_\_*

*Eisenia arborea \_\_\_\_\_\_\_\_*

*Laminaria farlowii \_\_\_\_\_\_\_\_*

*Macrocystis pyrifera \_\_\_\_\_\_\_\_*

*Pterygophora californica\_\_\_\_\_*

*Sargassum muticum \_\_\_\_\_\_\_\_*

*Sargassum horneri* *\_\_\_\_\_\_\_\_*

*Zonaria* sp. *\_\_\_\_\_\_\_\_*

Other brown algae *\_\_\_\_\_\_\_\_*

**Rhodophyta**

*Callophyllis* sp. *\_\_\_\_\_\_\_\_*

*Cryptopleura* spp. *\_\_\_\_\_\_\_\_*

*Gelidium* spp*. \_\_\_\_\_\_\_\_*

*Gigartina* spp*.* *\_\_\_\_\_\_\_\_*

*Laurencia* sp. *\_\_\_\_\_\_\_\_*

*Plocamium* sp. *\_\_\_\_\_\_\_\_*

*Rhodymenia* spp. *\_\_\_\_\_\_\_\_*

Articulated coralline \_*\_\_\_\_\_\_\_*

Encrusting coralline *\_\_\_\_\_\_\_\_*

Other red algae *\_\_\_\_\_\_\_\_*

Misc. plant *\_\_\_\_\_\_\_\_*

Bare rock \_\_\_\_\_\_\_\_

**Version 1.0 2018**

**Misc invert/CNId/SPONGE/Tun**

**PORIFERA NOTES:**Most common misc. invert:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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Other Sponges *\_\_\_\_\_\_*

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*Muricea californica \_\_\_\_\_\_*

*Muricea fruticosa \_\_\_\_\_\_*

*Sagartia/Cactosoma* spp. *\_\_\_\_\_\_*

*Urticina lofotensis \_\_\_\_\_\_*

*Urticina* spp. *\_\_\_\_\_\_*

**Hydrozoa**

Hydroid spp. *\_\_\_\_\_\_*

*Stylaster californicus \_\_\_\_\_\_*

**Annelida/Polychaeta**

*Chaetopterus* sp. *\_\_\_\_\_\_*

*Diopatra ornata \_\_\_\_\_\_*

*Dodecaceria* spp *\_\_\_\_\_\_*

*Phragmatopoma californica \_\_\_\_\_\_*

*Salmacina tribranchiata \_\_\_\_\_\_*

*Spirobranchus spinosus \_\_\_\_\_\_*

**Arthropoda/Crustacea**

*Balanus* sp. *\_\_\_\_\_\_*

*Cancer* sp. *\_\_\_\_\_\_*

*Panulirus interruptus \_\_\_\_\_\_*

**Bryozoa**

*Bugula* spp*. \_\_\_\_\_\_*

*Costazia costazii. \_\_\_\_\_\_*

*Watersipora* spp. *\_\_\_\_\_\_*

*Diaperoecia californica \_\_\_\_\_\_ Membranipora* spp. *\_\_\_\_\_\_*

Other Bryozoans *\_\_\_\_\_\_*

**Tunicates** *\_\_\_\_\_\_*

*Styela montereyensis \_\_\_\_\_\_*

**Misc. invertebrates** *\_\_\_\_\_\_*

**Molluscs** **NOTES:**

*Aplysia californica \_\_\_\_\_\_\_*

*Bursa californica* \_\_\_\_\_\_\_

*Crassadoma gigantea \_\_\_\_\_\_\_*

*Cryptochiton stelleri* \_\_\_\_\_\_\_

*Cypraea spadicea \_\_\_\_\_\_\_*

*Haliotis assimilis \_\_\_\_\_\_\_*

*Haliotis corrugata* \_\_\_\_\_\_\_

*Haliotis fulgens \_\_\_\_\_\_\_*

*Haliotis rufescens \_\_\_\_\_\_\_*

*Haliotis sorenseni* \_\_\_\_\_\_\_

*Kelletia kelletii \_\_\_\_\_\_\_*

*Lithopoma gibberosa* \_\_\_\_\_\_\_

*Megastraea undosa \_\_\_\_\_\_\_*

*Megathura crenulata \_\_\_\_\_\_\_*

*Octopus* spp. *\_\_\_\_\_\_\_*

*Serpulorbis squamigerus \_\_\_\_\_\_*

*Tegula regina \_\_\_\_\_\_\_*

**Version 1.0 2018**

**ECHINODERMS NOTES:**

*Centrostephanus coronatus \_\_\_\_\_\_*

*Cucumaria* sp. *\_\_\_\_\_\_*

*Dermasterias imbricata \_\_\_\_\_\_*

*Linckia* sp. *\_\_\_\_\_\_*

*Lytechinus anamesus \_\_\_\_\_\_*

*Ophiothrix spiculata \_\_\_\_\_\_*

*Pachythyone rubra \_\_\_\_\_\_*

*Parastichopus californicus \_\_\_\_\_\_*

*Parastichopus parvimensis \_\_\_\_\_\_*

*Patiria miniata \_\_\_\_\_\_*

*Pisaster giganteus \_\_\_\_\_\_*

*Pisaster ochraceus \_\_\_\_\_\_*

*Pycnopodia helianthoides \_\_\_\_\_\_*

*S. purpuratus**\_\_\_\_\_\_*

*S. franciscanus \_\_\_\_\_\_*

**Fish: NOTES:**

*Lythrypnus dalli \_\_\_\_\_\_*

*Coryphopterus nicholsii \_\_\_\_\_\_*

*Alloclinus holderi \_\_\_\_\_\_*

fish observed other than on rdfc or fish transects:

**Comments on ARMS:**

**Comments on Gear / Procedure / Transect/ Misc. obsevations:**

**Version 1.0 2018**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sampling Dates/Cruise#** |  |  | |  |  |
| **Wasting Disease** Urchins:  Stars: |  |  | |  |  |
| **Black Spot Disease** |  |  | |  |  |
| **Lead Line Condition:** |  |  | |  |  |
| **Percent Canopy Cover of**  ***Macrocystis pyrifera*** |  |  | |  |  |
| **Site Status** |  |  | |  |  |
| **# Fishing Lures Found** | **# Fishing Weights Found** | | **Notes:** | | |
| New: Old: | New: Old: | |  | | |

**TEMPERATURE LOGGER:**

|  |  |  |
| --- | --- | --- |
| **Date Deployed** | **Date Retrieved** | **Notes:** |
|  |  | See Temp. logger and site history forms |

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Participants** | **Date Completed** | **Notes** |
| **1 m Quadrats** |  |  |  |
| **5 m Quadrats** |  |  |  |
| **RPCs** |  |  |  |
| **Band Transects** |  |  |  |
| **Visual Fish Transects** |  |  |  |
| **Roving Diver Fish Count** |  |  |  |
| **Fish Size Frequency** |  |  |  |
| **Site (Video) Documentation** |  |  |  |
| **ARMS** |  |  |  |
| **Non-KFM** |  |  |  |
| **Species List** |  |  |  |

**SIZE FREQUENCY MEASURMENTS:** *Tegula regina* (60) \_\_\_\_\_\_

*Macrocystis pyrifera* (100)

*Tethya aurantia* (60)

*Stylaster californica* (50)

*Lophogorgia chilensis* (60)

*Muricea fruticosa* (60)

*Muricea californica* (60)

*Megathura crenulata* (60)

*Haliotis rufescens* (60)

*Haliotis corrugata* (60)

*Haliotis fulgens* (60)

*Kelletia kelletii* (60)

*Crassadoma gigantea* (60)

*Megastraea undosa* (60)

*Lithopoma gibberosa* (60)

*Lytechinus anamesus* (200)

*Pycnopodia helianthoides* (60)

*S. franciscanus* (200)

*S. purpuratus* (200)

*Patiria miniata* (60)

*Pisaster giganteus* (60)

**Version 1.0 2018**

|  |  |  |
| --- | --- | --- |
| **ABUNDANCE RATINGS** |  |  |
| X = present (no rating given) |  |  |
| 0 = noticeably absent, an effort was made to look for an organism that was not found. | | |
| 1 = rare, few organisms found |  |  |
| 2 = present, organism found in moderate numbers | |  |
| 3 = common, organism found over most of the site or in high density patches | | |
| 4 = abundant, organism present in higher than normal densities | | |
| **NOTES** |  |  |
| j = juvenile |  |  |
| s = shell only |  |  |
| #/j# = (e.g. 2/j3 - adult abundance 2, juvenile abundance 3) | | |

**Algae NOTES:**

**Chlorophyta**

*Codium* spp. *\_\_\_\_\_\_\_\_*

*Derbesia* sp. *\_\_\_\_\_\_\_\_*

*Ulva* spp.  *\_\_\_\_\_\_\_\_*

Other green algae *\_\_\_\_\_\_\_\_*

**Phaeophyta**

*Agarum fimbriatum \_\_\_\_\_\_\_\_*

*Colpomenia* sp. *\_\_\_\_\_\_\_\_*

*Cystoseira* sp. *\_\_\_\_\_\_\_\_*

*Desmarestia* sp. *\_\_\_\_\_\_\_\_*

*Dictyoneuropsis \_\_\_\_\_\_\_\_*

*Dictyota/Pachydictyon\_\_\_\_\_\_\_*

*Dictyopteris* sp. *\_\_\_\_\_\_\_\_*

*Eisenia arborea \_\_\_\_\_\_\_\_*

*Laminaria farlowii \_\_\_\_\_\_\_\_*

*Macrocystis pyrifera \_\_\_\_\_\_\_\_*

*Pterygophora californica\_\_\_\_\_*

*Sargassum muticum \_\_\_\_\_\_\_\_*

*Sargassum horneri* *\_\_\_\_\_\_\_\_*

*Zonaria* sp. *\_\_\_\_\_\_\_\_*

Other brown algae *\_\_\_\_\_\_\_\_*

**Rhodophyta**

*Callophyllis* sp. *\_\_\_\_\_\_\_\_*

*Cryptopleura* spp. *\_\_\_\_\_\_\_\_*

*Gelidium* spp*. \_\_\_\_\_\_\_\_*

*Gigartina* spp*.* *\_\_\_\_\_\_\_\_*

*Laurencia* sp. *\_\_\_\_\_\_\_\_*

*Plocamium* sp. *\_\_\_\_\_\_\_\_*

*Rhodymenia* spp. *\_\_\_\_\_\_\_\_*

Articulated coralline \_*\_\_\_\_\_\_\_*

Encrusting coralline *\_\_\_\_\_\_\_\_*

Other red algae *\_\_\_\_\_\_\_\_*

Misc. plant *\_\_\_\_\_\_\_\_*

Bare rock \_\_\_\_\_\_\_\_

**Version 1.0 2018**

**Misc invert/CNId/SPONGE/Tun**

**PORIFERA NOTES:**Most common misc. invert:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*Haliclona* sp*. \_\_\_\_\_\_*

*Hymenamphiastra cyanocrypta\_\_\_\_*

*Polymastia* spp. *\_\_\_\_\_\_*

*Tethya aurantia \_\_\_\_\_\_*

Other Sponges *\_\_\_\_\_\_*

**ANTHOZOA**

*Anthopleura* spp. *\_\_\_\_\_\_*

*Astrangia lajollaensis \_\_\_\_\_\_*

*Balanophyllia* *elegans \_\_\_\_\_\_*

*Corynactis californica \_\_\_\_\_\_*

*Eugorgia rubens \_\_\_\_\_\_*

*Lophogorgia chilensis \_\_\_\_\_\_*

*Metridium* spp. *\_\_\_\_\_\_*

*Muricea californica \_\_\_\_\_\_*

*Muricea fruticosa \_\_\_\_\_\_*

*Sagartia/Cactosoma* spp. *\_\_\_\_\_\_*

*Urticina lofotensis \_\_\_\_\_\_*

*Urticina* spp. *\_\_\_\_\_\_*

**Hydrozoa**

Hydroid spp. *\_\_\_\_\_\_*

*Stylaster californicus \_\_\_\_\_\_*

**Annelida/Polychaeta**

*Chaetopterus* sp. *\_\_\_\_\_\_*

*Diopatra ornata \_\_\_\_\_\_*

*Dodecaceria* spp *\_\_\_\_\_\_*

*Phragmatopoma californica \_\_\_\_\_\_*

*Salmacina tribranchiata \_\_\_\_\_\_*

*Spirobranchus spinosus \_\_\_\_\_\_*

**Arthropoda/Crustacea**

*Balanus* sp. *\_\_\_\_\_\_*

*Cancer* sp. *\_\_\_\_\_\_*

*Panulirus interruptus \_\_\_\_\_\_*

**Bryozoa**

*Bugula* spp*. \_\_\_\_\_\_*

*Costazia costazii. \_\_\_\_\_\_*

*Watersipora* spp. *\_\_\_\_\_\_*

*Diaperoecia californica \_\_\_\_\_\_ Membranipora* spp. *\_\_\_\_\_\_*

Other Bryozoans *\_\_\_\_\_\_*

**Tunicates** *\_\_\_\_\_\_*

*Styela montereyensis \_\_\_\_\_\_*

**Misc. invertebrates** *\_\_\_\_\_\_*

**Molluscs** **NOTES:**

*Aplysia californica \_\_\_\_\_\_\_*

*Bursa californica* \_\_\_\_\_\_\_

*Crassadoma gigantea \_\_\_\_\_\_\_*

*Cryptochiton stelleri* \_\_\_\_\_\_\_

*Cypraea spadicea \_\_\_\_\_\_\_*

*Haliotis assimilis \_\_\_\_\_\_\_*

*Haliotis corrugata* \_\_\_\_\_\_\_

*Haliotis fulgens \_\_\_\_\_\_\_*

*Haliotis rufescens \_\_\_\_\_\_\_*

*Haliotis sorenseni* \_\_\_\_\_\_\_

*Kelletia kelletii \_\_\_\_\_\_\_*

*Lithopoma gibberosa* \_\_\_\_\_\_\_

*Megastraea undosa \_\_\_\_\_\_\_*

*Megathura crenulata \_\_\_\_\_\_\_*

*Octopus* spp. *\_\_\_\_\_\_\_*

*Serpulorbis squamigerus \_\_\_\_\_\_*

*Tegula regina \_\_\_\_\_\_\_*

**Version 1.0 2018**

**ECHINODERMS NOTES:**

*Centrostephanus coronatus \_\_\_\_\_\_*

*Cucumaria* sp. *\_\_\_\_\_\_*

*Dermasterias imbricata \_\_\_\_\_\_*

*Linckia* sp. *\_\_\_\_\_\_*

*Lytechinus anamesus \_\_\_\_\_\_*

*Ophiothrix spiculata \_\_\_\_\_\_*

*Pachythyone rubra \_\_\_\_\_\_*

*Parastichopus californicus \_\_\_\_\_\_*

*Parastichopus parvimensis \_\_\_\_\_\_*

*Patiria miniata \_\_\_\_\_\_*

*Pisaster giganteus \_\_\_\_\_\_*

*Pisaster ochraceus \_\_\_\_\_\_*

*Pycnopodia helianthoides \_\_\_\_\_\_*

*S. purpuratus**\_\_\_\_\_\_*

*S. franciscanus \_\_\_\_\_\_*

**Fish: NOTES:**

*Lythrypnus dalli \_\_\_\_\_\_*

*Coryphopterus nicholsii \_\_\_\_\_\_*

*Alloclinus holderi \_\_\_\_\_\_*

fish observed other than on rdfc or fish transects:

**Comments on ARMS:**

**Comments on Gear / Procedure / Transect/ Misc. obsevations:**

**Version 1.0 2018**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sampling Dates/Cruise#** |  |  | |  |  |
| **Wasting Disease** Urchins:  Stars: |  |  | |  |  |
| **Black Spot Disease** |  |  | |  |  |
| **Lead Line Condition:** |  |  | |  |  |
| **Percent Canopy Cover of**  ***Macrocystis pyrifera*** |  |  | |  |  |
| **Site Status** |  |  | |  |  |
| **# Fishing Lures Found** | **# Fishing Weights Found** | | **Notes:** | | |
| New: Old: | New: Old: | |  | | |

**TEMPERATURE LOGGER:**

|  |  |  |
| --- | --- | --- |
| **Date Deployed** | **Date Retrieved** | **Notes:** |
|  |  | See Temp. logger and site history forms |

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Participants** | **Date Completed** | **Notes** |
| **1 m Quadrats** |  |  |  |
| **5 m Quadrats** |  |  |  |
| **RPCs** |  |  |  |
| **Band Transects** |  |  |  |
| **Visual Fish Transects** |  |  |  |
| **Roving Diver Fish Count** |  |  |  |
| **Fish Size Frequency** |  |  |  |
| **Site (Video) Documentation** |  |  |  |
| **ARMS** |  |  |  |
| **Non-KFM** |  |  |  |
| **Species List** |  |  |  |

**SIZE FREQUENCY MEASURMENTS:** *Tegula regina* (60) \_\_\_\_\_\_

*Macrocystis pyrifera* (100)

*Tethya aurantia* (60)

*Stylaster californica* (50)

*Lophogorgia chilensis* (60)

*Muricea fruticosa* (60)

*Muricea californica* (60)

*Megathura crenulata* (60)

*Haliotis rufescens* (60)

*Haliotis corrugata* (60)

*Haliotis fulgens* (60)

*Kelletia kelletii* (60)

*Crassadoma gigantea* (60)

*Megastraea undosa* (60)

*Lithopoma gibberosa* (60)

*Lytechinus anamesus* (200)

*Pycnopodia helianthoides* (60)

*S. franciscanus* (200)

*S. purpuratus* (200)

*Patiria miniata* (60)

*Pisaster giganteus* (60)

**Version 1.0 2018**

|  |  |  |
| --- | --- | --- |
| **ABUNDANCE RATINGS** |  |  |
| X = present (no rating given) |  |  |
| 0 = noticeably absent, an effort was made to look for an organism that was not found. | | |
| 1 = rare, few organisms found |  |  |
| 2 = present, organism found in moderate numbers | |  |
| 3 = common, organism found over most of the site or in high density patches | | |
| 4 = abundant, organism present in higher than normal densities | | |
| **NOTES** |  |  |
| j = juvenile |  |  |
| s = shell only |  |  |
| #/j# = (e.g. 2/j3 - adult abundance 2, juvenile abundance 3) | | |

**Algae NOTES:**

**Chlorophyta**

*Codium* spp. *\_\_\_\_\_\_\_\_*

*Derbesia* sp. *\_\_\_\_\_\_\_\_*

*Ulva* spp.  *\_\_\_\_\_\_\_\_*

Other green algae *\_\_\_\_\_\_\_\_*

**Phaeophyta**

*Agarum fimbriatum \_\_\_\_\_\_\_\_*

*Colpomenia* sp. *\_\_\_\_\_\_\_\_*

*Cystoseira* sp. *\_\_\_\_\_\_\_\_*

*Desmarestia* sp. *\_\_\_\_\_\_\_\_*

*Dictyoneuropsis \_\_\_\_\_\_\_\_*

*Dictyota/Pachydictyon\_\_\_\_\_\_\_*

*Dictyopteris* sp. *\_\_\_\_\_\_\_\_*

*Eisenia arborea \_\_\_\_\_\_\_\_*

*Laminaria farlowii \_\_\_\_\_\_\_\_*

*Macrocystis pyrifera \_\_\_\_\_\_\_\_*

*Pterygophora californica\_\_\_\_\_*

*Sargassum muticum \_\_\_\_\_\_\_\_*

*Sargassum horneri* *\_\_\_\_\_\_\_\_*

*Zonaria* sp. *\_\_\_\_\_\_\_\_*

Other brown algae *\_\_\_\_\_\_\_\_*

**Rhodophyta**

*Callophyllis* sp. *\_\_\_\_\_\_\_\_*

*Cryptopleura* spp. *\_\_\_\_\_\_\_\_*

*Gelidium* spp*. \_\_\_\_\_\_\_\_*

*Gigartina* spp*.* *\_\_\_\_\_\_\_\_*

*Laurencia* sp. *\_\_\_\_\_\_\_\_*

*Plocamium* sp. *\_\_\_\_\_\_\_\_*

*Rhodymenia* spp. *\_\_\_\_\_\_\_\_*

Articulated coralline \_*\_\_\_\_\_\_\_*

Encrusting coralline *\_\_\_\_\_\_\_\_*

Other red algae *\_\_\_\_\_\_\_\_*

Misc. plant *\_\_\_\_\_\_\_\_*

Bare rock \_\_\_\_\_\_\_\_

**Version 1.0 2018**

**Misc invert/CNId/SPONGE/Tun**

**PORIFERA NOTES:**Most common misc. invert:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*Haliclona* sp*. \_\_\_\_\_\_*

*Hymenamphiastra cyanocrypta\_\_\_\_*

*Polymastia* spp. *\_\_\_\_\_\_*

*Tethya aurantia \_\_\_\_\_\_*

Other Sponges *\_\_\_\_\_\_*

**ANTHOZOA**

*Anthopleura* spp. *\_\_\_\_\_\_*

*Astrangia lajollaensis \_\_\_\_\_\_*

*Balanophyllia* *elegans \_\_\_\_\_\_*

*Corynactis californica \_\_\_\_\_\_*

*Eugorgia rubens \_\_\_\_\_\_*

*Lophogorgia chilensis \_\_\_\_\_\_*

*Metridium* spp. *\_\_\_\_\_\_*

*Muricea californica \_\_\_\_\_\_*

*Muricea fruticosa \_\_\_\_\_\_*

*Sagartia/Cactosoma* spp. *\_\_\_\_\_\_*

*Urticina lofotensis \_\_\_\_\_\_*

*Urticina* spp. *\_\_\_\_\_\_*

**Hydrozoa**

Hydroid spp. *\_\_\_\_\_\_*

*Stylaster californicus \_\_\_\_\_\_*

**Annelida/Polychaeta**

*Chaetopterus* sp. *\_\_\_\_\_\_*

*Diopatra ornata \_\_\_\_\_\_*

*Dodecaceria* spp *\_\_\_\_\_\_*

*Phragmatopoma californica \_\_\_\_\_\_*

*Salmacina tribranchiata \_\_\_\_\_\_*

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**Arthropoda/Crustacea**

*Balanus* sp. *\_\_\_\_\_\_*

*Cancer* sp. *\_\_\_\_\_\_*

*Panulirus interruptus \_\_\_\_\_\_*

**Bryozoa**

*Bugula* spp*. \_\_\_\_\_\_*

*Costazia costazii. \_\_\_\_\_\_*

*Watersipora* spp. *\_\_\_\_\_\_*

*Diaperoecia californica \_\_\_\_\_\_ Membranipora* spp. *\_\_\_\_\_\_*

Other Bryozoans *\_\_\_\_\_\_*

**Tunicates** *\_\_\_\_\_\_*

*Styela montereyensis \_\_\_\_\_\_*

**Misc. invertebrates** *\_\_\_\_\_\_*

**Molluscs** **NOTES:**

*Aplysia californica \_\_\_\_\_\_\_*

*Bursa californica* \_\_\_\_\_\_\_

*Crassadoma gigantea \_\_\_\_\_\_\_*

*Cryptochiton stelleri* \_\_\_\_\_\_\_

*Cypraea spadicea \_\_\_\_\_\_\_*

*Haliotis assimilis \_\_\_\_\_\_\_*

*Haliotis corrugata* \_\_\_\_\_\_\_

*Haliotis fulgens \_\_\_\_\_\_\_*

*Haliotis rufescens \_\_\_\_\_\_\_*

*Haliotis sorenseni* \_\_\_\_\_\_\_

*Kelletia kelletii \_\_\_\_\_\_\_*

*Lithopoma gibberosa* \_\_\_\_\_\_\_

*Megastraea undosa \_\_\_\_\_\_\_*

*Megathura crenulata \_\_\_\_\_\_\_*

*Octopus* spp. *\_\_\_\_\_\_\_*

*Serpulorbis squamigerus \_\_\_\_\_\_*

*Tegula regina \_\_\_\_\_\_\_*

**Version 1.0 2018**

**ECHINODERMS NOTES:**

*Centrostephanus coronatus \_\_\_\_\_\_*

*Cucumaria* sp. *\_\_\_\_\_\_*

*Dermasterias imbricata \_\_\_\_\_\_*

*Linckia* sp. *\_\_\_\_\_\_*

*Lytechinus anamesus \_\_\_\_\_\_*

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*Pycnopodia helianthoides \_\_\_\_\_\_*

*S. purpuratus**\_\_\_\_\_\_*

*S. franciscanus \_\_\_\_\_\_*

**Fish: NOTES:**

*Lythrypnus dalli \_\_\_\_\_\_*

*Coryphopterus nicholsii \_\_\_\_\_\_*

*Alloclinus holderi \_\_\_\_\_\_*

fish observed other than on rdfc or fish transects:

**Comments on ARMS:**

**Comments on Gear / Procedure / Transect/ Misc. obsevations:**

**Version 1.0 2018**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sampling Dates/Cruise#** |  |  | |  |  |
| **Wasting Disease** Urchins:  Stars: |  |  | |  |  |
| **Black Spot Disease** |  |  | |  |  |
| **Lead Line Condition:** |  |  | |  |  |
| **Percent Canopy Cover of**  ***Macrocystis pyrifera*** |  |  | |  |  |
| **Site Status** |  |  | |  |  |
| **# Fishing Lures Found** | **# Fishing Weights Found** | | **Notes:** | | |
| New: Old: | New: Old: | |  | | |

**TEMPERATURE LOGGER:**

|  |  |  |
| --- | --- | --- |
| **Date Deployed** | **Date Retrieved** | **Notes:** |
|  |  | See Temp. logger and site history forms |

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Participants** | **Date Completed** | **Notes** |
| **1 m Quadrats** |  |  |  |
| **5 m Quadrats** |  |  |  |
| **RPCs** |  |  |  |
| **Band Transects** |  |  |  |
| **Visual Fish Transects** |  |  |  |
| **Roving Diver Fish Count** |  |  |  |
| **Fish Size Frequency** |  |  |  |
| **Site (Video) Documentation** |  |  |  |
| **ARMS** |  |  |  |
| **Non-KFM** |  |  |  |
| **Species List** |  |  |  |

**SIZE FREQUENCY MEASURMENTS:** *Tegula regina* (60) \_\_\_\_\_\_

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*Pisaster giganteus* (60)

**Version 1.0 2018**

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| X = present (no rating given) |  |  |
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| **NOTES** |  |  |
| j = juvenile |  |  |
| s = shell only |  |  |
| #/j# = (e.g. 2/j3 - adult abundance 2, juvenile abundance 3) | | |

**Algae NOTES:**

**Chlorophyta**

*Codium* spp. *\_\_\_\_\_\_\_\_*

*Derbesia* sp. *\_\_\_\_\_\_\_\_*

*Ulva* spp.  *\_\_\_\_\_\_\_\_*

Other green algae *\_\_\_\_\_\_\_\_*

**Phaeophyta**

*Agarum fimbriatum \_\_\_\_\_\_\_\_*

*Colpomenia* sp. *\_\_\_\_\_\_\_\_*

*Cystoseira* sp. *\_\_\_\_\_\_\_\_*

*Desmarestia* sp. *\_\_\_\_\_\_\_\_*

*Dictyoneuropsis \_\_\_\_\_\_\_\_*

*Dictyota/Pachydictyon\_\_\_\_\_\_\_*

*Dictyopteris* sp. *\_\_\_\_\_\_\_\_*

*Eisenia arborea \_\_\_\_\_\_\_\_*

*Laminaria farlowii \_\_\_\_\_\_\_\_*

*Macrocystis pyrifera \_\_\_\_\_\_\_\_*

*Pterygophora californica\_\_\_\_\_*

*Sargassum muticum \_\_\_\_\_\_\_\_*

*Sargassum horneri* *\_\_\_\_\_\_\_\_*

*Zonaria* sp. *\_\_\_\_\_\_\_\_*

Other brown algae *\_\_\_\_\_\_\_\_*

**Rhodophyta**

*Callophyllis* sp. *\_\_\_\_\_\_\_\_*

*Cryptopleura* spp. *\_\_\_\_\_\_\_\_*

*Gelidium* spp*. \_\_\_\_\_\_\_\_*

*Gigartina* spp*.* *\_\_\_\_\_\_\_\_*

*Laurencia* sp. *\_\_\_\_\_\_\_\_*

*Plocamium* sp. *\_\_\_\_\_\_\_\_*

*Rhodymenia* spp. *\_\_\_\_\_\_\_\_*

Articulated coralline \_*\_\_\_\_\_\_\_*

Encrusting coralline *\_\_\_\_\_\_\_\_*

Other red algae *\_\_\_\_\_\_\_\_*

Misc. plant *\_\_\_\_\_\_\_\_*

Bare rock \_\_\_\_\_\_\_\_

**Version 1.0 2018**

**Misc invert/CNId/SPONGE/Tun**

**PORIFERA NOTES:**Most common misc. invert:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*Haliclona* sp*. \_\_\_\_\_\_*

*Hymenamphiastra cyanocrypta\_\_\_\_*

*Polymastia* spp. *\_\_\_\_\_\_*

*Tethya aurantia \_\_\_\_\_\_*

Other Sponges *\_\_\_\_\_\_*

**ANTHOZOA**

*Anthopleura* spp. *\_\_\_\_\_\_*

*Astrangia lajollaensis \_\_\_\_\_\_*

*Balanophyllia* *elegans \_\_\_\_\_\_*

*Corynactis californica \_\_\_\_\_\_*

*Eugorgia rubens \_\_\_\_\_\_*

*Lophogorgia chilensis \_\_\_\_\_\_*

*Metridium* spp. *\_\_\_\_\_\_*

*Muricea californica \_\_\_\_\_\_*

*Muricea fruticosa \_\_\_\_\_\_*

*Sagartia/Cactosoma* spp. *\_\_\_\_\_\_*

*Urticina lofotensis \_\_\_\_\_\_*

*Urticina* spp. *\_\_\_\_\_\_*

**Hydrozoa**

Hydroid spp. *\_\_\_\_\_\_*

*Stylaster californicus \_\_\_\_\_\_*

**Annelida/Polychaeta**

*Chaetopterus* sp. *\_\_\_\_\_\_*

*Diopatra ornata \_\_\_\_\_\_*

*Dodecaceria* spp *\_\_\_\_\_\_*

*Phragmatopoma californica \_\_\_\_\_\_*

*Salmacina tribranchiata \_\_\_\_\_\_*

*Spirobranchus spinosus \_\_\_\_\_\_*

**Arthropoda/Crustacea**

*Balanus* sp. *\_\_\_\_\_\_*

*Cancer* sp. *\_\_\_\_\_\_*

*Panulirus interruptus \_\_\_\_\_\_*

**Bryozoa**

*Bugula* spp*. \_\_\_\_\_\_*

*Costazia costazii. \_\_\_\_\_\_*

*Watersipora* spp. *\_\_\_\_\_\_*

*Diaperoecia californica \_\_\_\_\_\_ Membranipora* spp. *\_\_\_\_\_\_*

Other Bryozoans *\_\_\_\_\_\_*

**Tunicates** *\_\_\_\_\_\_*

*Styela montereyensis \_\_\_\_\_\_*

**Misc. invertebrates** *\_\_\_\_\_\_*

**Molluscs** **NOTES:**

*Aplysia californica \_\_\_\_\_\_\_*

*Bursa californica* \_\_\_\_\_\_\_

*Crassadoma gigantea \_\_\_\_\_\_\_*

*Cryptochiton stelleri* \_\_\_\_\_\_\_

*Cypraea spadicea \_\_\_\_\_\_\_*

*Haliotis assimilis \_\_\_\_\_\_\_*

*Haliotis corrugata* \_\_\_\_\_\_\_

*Haliotis fulgens \_\_\_\_\_\_\_*

*Haliotis rufescens \_\_\_\_\_\_\_*

*Haliotis sorenseni* \_\_\_\_\_\_\_

*Kelletia kelletii \_\_\_\_\_\_\_*

*Lithopoma gibberosa* \_\_\_\_\_\_\_

*Megastraea undosa \_\_\_\_\_\_\_*

*Megathura crenulata \_\_\_\_\_\_\_*

*Octopus* spp. *\_\_\_\_\_\_\_*

*Serpulorbis squamigerus \_\_\_\_\_\_*

*Tegula regina \_\_\_\_\_\_\_*

**Version 1.0 2018**

**ECHINODERMS NOTES:**

*Centrostephanus coronatus \_\_\_\_\_\_*

*Cucumaria* sp. *\_\_\_\_\_\_*

*Dermasterias imbricata \_\_\_\_\_\_*

*Linckia* sp. *\_\_\_\_\_\_*

*Lytechinus anamesus \_\_\_\_\_\_*

*Ophiothrix spiculata \_\_\_\_\_\_*

*Pachythyone rubra \_\_\_\_\_\_*

*Parastichopus californicus \_\_\_\_\_\_*

*Parastichopus parvimensis \_\_\_\_\_\_*

*Patiria miniata \_\_\_\_\_\_*

*Pisaster giganteus \_\_\_\_\_\_*

*Pisaster ochraceus \_\_\_\_\_\_*

*Pycnopodia helianthoides \_\_\_\_\_\_*

*S. purpuratus**\_\_\_\_\_\_*

*S. franciscanus \_\_\_\_\_\_*

**Fish: NOTES:**

*Lythrypnus dalli \_\_\_\_\_\_*

*Coryphopterus nicholsii \_\_\_\_\_\_*

*Alloclinus holderi \_\_\_\_\_\_*

fish observed other than on rdfc or fish transects:

**Comments on ARMS:**

**Comments on Gear / Procedure / Transect/ Misc. obsevations:**

**Version 1.0 2018**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sampling Dates/Cruise#** |  |  | |  |  |
| **Wasting Disease** Urchins:  Stars: |  |  | |  |  |
| **Black Spot Disease** |  |  | |  |  |
| **Lead Line Condition:** |  |  | |  |  |
| **Percent Canopy Cover of**  ***Macrocystis pyrifera*** |  |  | |  |  |
| **Site Status** |  |  | |  |  |
| **# Fishing Lures Found** | **# Fishing Weights Found** | | **Notes:** | | |
| New: Old: | New: Old: | |  | | |

**TEMPERATURE LOGGER:**

|  |  |  |
| --- | --- | --- |
| **Date Deployed** | **Date Retrieved** | **Notes:** |
|  |  | See Temp. logger and site history forms |

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Participants** | **Date Completed** | **Notes** |
| **1 m Quadrats** |  |  |  |
| **5 m Quadrats** |  |  |  |
| **RPCs** |  |  |  |
| **Band Transects** |  |  |  |
| **Visual Fish Transects** |  |  |  |
| **Roving Diver Fish Count** |  |  |  |
| **Fish Size Frequency** |  |  |  |
| **Site (Video) Documentation** |  |  |  |
| **ARMS** |  |  |  |
| **Non-KFM** |  |  |  |
| **Species List** |  |  |  |

**SIZE FREQUENCY MEASURMENTS:** *Tegula regina* (60) \_\_\_\_\_\_

*Macrocystis pyrifera* (100)

*Tethya aurantia* (60)

*Stylaster californica* (50)

*Lophogorgia chilensis* (60)

*Muricea fruticosa* (60)

*Muricea californica* (60)

*Megathura crenulata* (60)

*Haliotis rufescens* (60)

*Haliotis corrugata* (60)

*Haliotis fulgens* (60)

*Kelletia kelletii* (60)

*Crassadoma gigantea* (60)

*Megastraea undosa* (60)

*Lithopoma gibberosa* (60)

*Lytechinus anamesus* (200)

*Pycnopodia helianthoides* (60)

*S. franciscanus* (200)

*S. purpuratus* (200)

*Patiria miniata* (60)

*Pisaster giganteus* (60)

**Version 1.0 2018**

|  |  |  |
| --- | --- | --- |
| **ABUNDANCE RATINGS** |  |  |
| X = present (no rating given) |  |  |
| 0 = noticeably absent, an effort was made to look for an organism that was not found. | | |
| 1 = rare, few organisms found |  |  |
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| 4 = abundant, organism present in higher than normal densities | | |
| **NOTES** |  |  |
| j = juvenile |  |  |
| s = shell only |  |  |
| #/j# = (e.g. 2/j3 - adult abundance 2, juvenile abundance 3) | | |

**Algae NOTES:**

**Chlorophyta**

*Codium* spp. *\_\_\_\_\_\_\_\_*

*Derbesia* sp. *\_\_\_\_\_\_\_\_*

*Ulva* spp.  *\_\_\_\_\_\_\_\_*

Other green algae *\_\_\_\_\_\_\_\_*

**Phaeophyta**

*Agarum fimbriatum \_\_\_\_\_\_\_\_*

*Colpomenia* sp. *\_\_\_\_\_\_\_\_*

*Cystoseira* sp. *\_\_\_\_\_\_\_\_*

*Desmarestia* sp. *\_\_\_\_\_\_\_\_*

*Dictyoneuropsis \_\_\_\_\_\_\_\_*

*Dictyota/Pachydictyon\_\_\_\_\_\_\_*

*Dictyopteris* sp. *\_\_\_\_\_\_\_\_*

*Eisenia arborea \_\_\_\_\_\_\_\_*

*Laminaria farlowii \_\_\_\_\_\_\_\_*

*Macrocystis pyrifera \_\_\_\_\_\_\_\_*

*Pterygophora californica\_\_\_\_\_*

*Sargassum muticum \_\_\_\_\_\_\_\_*

*Sargassum horneri* *\_\_\_\_\_\_\_\_*

*Zonaria* sp. *\_\_\_\_\_\_\_\_*

Other brown algae *\_\_\_\_\_\_\_\_*

**Rhodophyta**

*Callophyllis* sp. *\_\_\_\_\_\_\_\_*

*Cryptopleura* spp. *\_\_\_\_\_\_\_\_*

*Gelidium* spp*. \_\_\_\_\_\_\_\_*

*Gigartina* spp*.* *\_\_\_\_\_\_\_\_*

*Laurencia* sp. *\_\_\_\_\_\_\_\_*

*Plocamium* sp. *\_\_\_\_\_\_\_\_*

*Rhodymenia* spp. *\_\_\_\_\_\_\_\_*

Articulated coralline \_*\_\_\_\_\_\_\_*

Encrusting coralline *\_\_\_\_\_\_\_\_*

Other red algae *\_\_\_\_\_\_\_\_*

Misc. plant *\_\_\_\_\_\_\_\_*

Bare rock \_\_\_\_\_\_\_\_

**Version 1.0 2018**

**Misc invert/CNId/SPONGE/Tun**

**PORIFERA NOTES:**Most common misc. invert:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*Haliclona* sp*. \_\_\_\_\_\_*

*Hymenamphiastra cyanocrypta\_\_\_\_*

*Polymastia* spp. *\_\_\_\_\_\_*

*Tethya aurantia \_\_\_\_\_\_*

Other Sponges *\_\_\_\_\_\_*

**ANTHOZOA**

*Anthopleura* spp. *\_\_\_\_\_\_*

*Astrangia lajollaensis \_\_\_\_\_\_*

*Balanophyllia* *elegans \_\_\_\_\_\_*

*Corynactis californica \_\_\_\_\_\_*

*Eugorgia rubens \_\_\_\_\_\_*

*Lophogorgia chilensis \_\_\_\_\_\_*

*Metridium* spp. *\_\_\_\_\_\_*

*Muricea californica \_\_\_\_\_\_*

*Muricea fruticosa \_\_\_\_\_\_*

*Sagartia/Cactosoma* spp. *\_\_\_\_\_\_*

*Urticina lofotensis \_\_\_\_\_\_*

*Urticina* spp. *\_\_\_\_\_\_*

**Hydrozoa**

Hydroid spp. *\_\_\_\_\_\_*

*Stylaster californicus \_\_\_\_\_\_*

**Annelida/Polychaeta**

*Chaetopterus* sp. *\_\_\_\_\_\_*

*Diopatra ornata \_\_\_\_\_\_*

*Dodecaceria* spp *\_\_\_\_\_\_*

*Phragmatopoma californica \_\_\_\_\_\_*

*Salmacina tribranchiata \_\_\_\_\_\_*

*Spirobranchus spinosus \_\_\_\_\_\_*

**Arthropoda/Crustacea**

*Balanus* sp. *\_\_\_\_\_\_*

*Cancer* sp. *\_\_\_\_\_\_*

*Panulirus interruptus \_\_\_\_\_\_*

**Bryozoa**

*Bugula* spp*. \_\_\_\_\_\_*

*Costazia costazii. \_\_\_\_\_\_*

*Watersipora* spp. *\_\_\_\_\_\_*

*Diaperoecia californica \_\_\_\_\_\_ Membranipora* spp. *\_\_\_\_\_\_*

Other Bryozoans *\_\_\_\_\_\_*

**Tunicates** *\_\_\_\_\_\_*

*Styela montereyensis \_\_\_\_\_\_*

**Misc. invertebrates** *\_\_\_\_\_\_*

**Molluscs** **NOTES:**

*Aplysia californica \_\_\_\_\_\_\_*

*Bursa californica* \_\_\_\_\_\_\_

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*Cryptochiton stelleri* \_\_\_\_\_\_\_

*Cypraea spadicea \_\_\_\_\_\_\_*

*Haliotis assimilis \_\_\_\_\_\_\_*

*Haliotis corrugata* \_\_\_\_\_\_\_

*Haliotis fulgens \_\_\_\_\_\_\_*

*Haliotis rufescens \_\_\_\_\_\_\_*

*Haliotis sorenseni* \_\_\_\_\_\_\_

*Kelletia kelletii \_\_\_\_\_\_\_*

*Lithopoma gibberosa* \_\_\_\_\_\_\_

*Megastraea undosa \_\_\_\_\_\_\_*

*Megathura crenulata \_\_\_\_\_\_\_*

*Octopus* spp. *\_\_\_\_\_\_\_*

*Serpulorbis squamigerus \_\_\_\_\_\_*

*Tegula regina \_\_\_\_\_\_\_*

**Version 1.0 2018**

**ECHINODERMS NOTES:**

*Centrostephanus coronatus \_\_\_\_\_\_*

*Cucumaria* sp. *\_\_\_\_\_\_*

*Dermasterias imbricata \_\_\_\_\_\_*

*Linckia* sp. *\_\_\_\_\_\_*

*Lytechinus anamesus \_\_\_\_\_\_*

*Ophiothrix spiculata \_\_\_\_\_\_*

*Pachythyone rubra \_\_\_\_\_\_*

*Parastichopus californicus \_\_\_\_\_\_*

*Parastichopus parvimensis \_\_\_\_\_\_*

*Patiria miniata \_\_\_\_\_\_*

*Pisaster giganteus \_\_\_\_\_\_*

*Pisaster ochraceus \_\_\_\_\_\_*

*Pycnopodia helianthoides \_\_\_\_\_\_*

*S. purpuratus**\_\_\_\_\_\_*

*S. franciscanus \_\_\_\_\_\_*

**Fish: NOTES:**

*Lythrypnus dalli \_\_\_\_\_\_*

*Coryphopterus nicholsii \_\_\_\_\_\_*

*Alloclinus holderi \_\_\_\_\_\_*

fish observed other than on rdfc or fish transects:

**Comments on ARMS:**

**Comments on Gear / Procedure / Transect/ Misc. obsevations:**

**Version 1.0 2018**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sampling Dates/Cruise#** |  |  | |  |  |
| **Wasting Disease** Urchins:  Stars: |  |  | |  |  |
| **Black Spot Disease** |  |  | |  |  |
| **Lead Line Condition:** |  |  | |  |  |
| **Percent Canopy Cover of**  ***Macrocystis pyrifera*** |  |  | |  |  |
| **Site Status** |  |  | |  |  |
| **# Fishing Lures Found** | **# Fishing Weights Found** | | **Notes:** | | |
| New: Old: | New: Old: | |  | | |

**TEMPERATURE LOGGER:**

|  |  |  |
| --- | --- | --- |
| **Date Deployed** | **Date Retrieved** | **Notes:** |
|  |  | See Temp. logger and site history forms |

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Participants** | **Date Completed** | **Notes** |
| **1 m Quadrats** |  |  |  |
| **5 m Quadrats** |  |  |  |
| **RPCs** |  |  |  |
| **Band Transects** |  |  |  |
| **Visual Fish Transects** |  |  |  |
| **Roving Diver Fish Count** |  |  |  |
| **Fish Size Frequency** |  |  |  |
| **Site (Video) Documentation** |  |  |  |
| **ARMS** |  |  |  |
| **Non-KFM** |  |  |  |
| **Species List** |  |  |  |

**SIZE FREQUENCY MEASURMENTS:** *Tegula regina* (60) \_\_\_\_\_\_

*Macrocystis pyrifera* (100)

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*Muricea fruticosa* (60)

*Muricea californica* (60)

*Megathura crenulata* (60)

*Haliotis rufescens* (60)

*Haliotis corrugata* (60)

*Haliotis fulgens* (60)

*Kelletia kelletii* (60)

*Crassadoma gigantea* (60)

*Megastraea undosa* (60)

*Lithopoma gibberosa* (60)

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*Pycnopodia helianthoides* (60)

*S. franciscanus* (200)

*S. purpuratus* (200)

*Patiria miniata* (60)

*Pisaster giganteus* (60)

**Version 1.0 2018**

|  |  |  |
| --- | --- | --- |
| **ABUNDANCE RATINGS** |  |  |
| X = present (no rating given) |  |  |
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| **NOTES** |  |  |
| j = juvenile |  |  |
| s = shell only |  |  |
| #/j# = (e.g. 2/j3 - adult abundance 2, juvenile abundance 3) | | |

**Algae NOTES:**

**Chlorophyta**

*Codium* spp. *\_\_\_\_\_\_\_\_*

*Derbesia* sp. *\_\_\_\_\_\_\_\_*

*Ulva* spp.  *\_\_\_\_\_\_\_\_*

Other green algae *\_\_\_\_\_\_\_\_*

**Phaeophyta**

*Agarum fimbriatum \_\_\_\_\_\_\_\_*

*Colpomenia* sp. *\_\_\_\_\_\_\_\_*

*Cystoseira* sp. *\_\_\_\_\_\_\_\_*

*Desmarestia* sp. *\_\_\_\_\_\_\_\_*

*Dictyoneuropsis \_\_\_\_\_\_\_\_*

*Dictyota/Pachydictyon\_\_\_\_\_\_\_*

*Dictyopteris* sp. *\_\_\_\_\_\_\_\_*

*Eisenia arborea \_\_\_\_\_\_\_\_*

*Laminaria farlowii \_\_\_\_\_\_\_\_*

*Macrocystis pyrifera \_\_\_\_\_\_\_\_*

*Pterygophora californica\_\_\_\_\_*

*Sargassum muticum \_\_\_\_\_\_\_\_*

*Sargassum horneri* *\_\_\_\_\_\_\_\_*

*Zonaria* sp. *\_\_\_\_\_\_\_\_*

Other brown algae *\_\_\_\_\_\_\_\_*

**Rhodophyta**

*Callophyllis* sp. *\_\_\_\_\_\_\_\_*

*Cryptopleura* spp. *\_\_\_\_\_\_\_\_*

*Gelidium* spp*. \_\_\_\_\_\_\_\_*

*Gigartina* spp*.* *\_\_\_\_\_\_\_\_*

*Laurencia* sp. *\_\_\_\_\_\_\_\_*

*Plocamium* sp. *\_\_\_\_\_\_\_\_*

*Rhodymenia* spp. *\_\_\_\_\_\_\_\_*

Articulated coralline \_*\_\_\_\_\_\_\_*

Encrusting coralline *\_\_\_\_\_\_\_\_*

Other red algae *\_\_\_\_\_\_\_\_*

Misc. plant *\_\_\_\_\_\_\_\_*

Bare rock \_\_\_\_\_\_\_\_

**Version 1.0 2018**

**Misc invert/CNId/SPONGE/Tun**

**PORIFERA NOTES:**Most common misc. invert:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*Haliclona* sp*. \_\_\_\_\_\_*

*Hymenamphiastra cyanocrypta\_\_\_\_*

*Polymastia* spp. *\_\_\_\_\_\_*

*Tethya aurantia \_\_\_\_\_\_*

Other Sponges *\_\_\_\_\_\_*

**ANTHOZOA**

*Anthopleura* spp. *\_\_\_\_\_\_*

*Astrangia lajollaensis \_\_\_\_\_\_*

*Balanophyllia* *elegans \_\_\_\_\_\_*

*Corynactis californica \_\_\_\_\_\_*

*Eugorgia rubens \_\_\_\_\_\_*

*Lophogorgia chilensis \_\_\_\_\_\_*

*Metridium* spp. *\_\_\_\_\_\_*

*Muricea californica \_\_\_\_\_\_*

*Muricea fruticosa \_\_\_\_\_\_*

*Sagartia/Cactosoma* spp. *\_\_\_\_\_\_*

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*Urticina* spp. *\_\_\_\_\_\_*

**Hydrozoa**

Hydroid spp. *\_\_\_\_\_\_*

*Stylaster californicus \_\_\_\_\_\_*

**Annelida/Polychaeta**

*Chaetopterus* sp. *\_\_\_\_\_\_*

*Diopatra ornata \_\_\_\_\_\_*

*Dodecaceria* spp *\_\_\_\_\_\_*

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*Balanus* sp. *\_\_\_\_\_\_*

*Cancer* sp. *\_\_\_\_\_\_*

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**Bryozoa**

*Bugula* spp*. \_\_\_\_\_\_*

*Costazia costazii. \_\_\_\_\_\_*

*Watersipora* spp. *\_\_\_\_\_\_*

*Diaperoecia californica \_\_\_\_\_\_ Membranipora* spp. *\_\_\_\_\_\_*

Other Bryozoans *\_\_\_\_\_\_*

**Tunicates** *\_\_\_\_\_\_*

*Styela montereyensis \_\_\_\_\_\_*

**Misc. invertebrates** *\_\_\_\_\_\_*

**Molluscs** **NOTES:**

*Aplysia californica \_\_\_\_\_\_\_*

*Bursa californica* \_\_\_\_\_\_\_

*Crassadoma gigantea \_\_\_\_\_\_\_*

*Cryptochiton stelleri* \_\_\_\_\_\_\_

*Cypraea spadicea \_\_\_\_\_\_\_*

*Haliotis assimilis \_\_\_\_\_\_\_*

*Haliotis corrugata \_*\_\_\_\_\_\_

*Haliotis fulgens \_\_\_\_\_\_\_*

*Haliotis rufescens* \_\_\_\_\_\_\_

*Haliotis sorenseni \_*\_\_\_\_\_\_

*Kelletia kelletii \_\_\_\_\_\_\_*

*Lithopoma gibberosa \_\_\_\_\_\_\_*

*Megastraea undosa \_\_\_\_\_\_\_*

*Megathura crenulata* \_\_\_\_\_\_\_

*Octopus* spp. *\_\_\_\_\_\_\_*

*Serpulorbis squamigerus \_\_\_\_\_\_*

*Tegula regina \_\_\_\_\_\_\_*

**Version 1.0 2018**

**ECHINODERMS NOTES:**

*Centrostephanus coronatus \_\_\_\_\_\_*

*Cucumaria* sp. *\_\_\_\_\_\_*

*Dermasterias imbricata \_\_\_\_\_\_*

*Linckia* sp. *\_\_\_\_\_\_*

*Lytechinus anamesus \_\_\_\_\_\_*

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*Patiria miniata \_\_\_\_\_\_*

*Pisaster giganteus \_\_\_\_\_\_*

*Pisaster ochraceus \_\_\_\_\_\_*

*Pycnopodia helianthoides \_\_\_\_\_\_*

*S. purpuratus**\_\_\_\_\_\_*

*S. franciscanus \_\_\_\_\_\_*

**Fish: NOTES:**

*Lythrypnus dalli \_\_\_\_\_\_*

*Coryphopterus nicholsii \_\_\_\_\_\_*

*Alloclinus holderi \_\_\_\_\_\_*

fish observed other than on rdfc or fish transects:

**Comments on ARMS:**

**Comments on Gear / Procedure / Transect/ Misc. obsevations:**

**Version 1.0 2018**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sampling Dates/Cruise#** |  |  | |  |  |
| **Wasting Disease** Urchins:  Stars: |  |  | |  |  |
| **Black Spot Disease** |  |  | |  |  |
| **Lead Line Condition:** |  |  | |  |  |
| **Percent Canopy Cover of**  ***Macrocystis pyrifera*** |  |  | |  |  |
| **Site Status** |  |  | |  |  |
| **# Fishing Lures Found** | **# Fishing Weights Found** | | **Notes:** | | |
| New: Old: | New: Old: | |  | | |

**TEMPERATURE LOGGER:**

|  |  |  |
| --- | --- | --- |
| **Date Deployed** | **Date Retrieved** | **Notes:** |
|  |  | See Temp. logger and site history forms |

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Participants** | **Date Completed** | **Notes** |
| **1 m Quadrats** |  |  |  |
| **5 m Quadrats** |  |  |  |
| **RPCs** |  |  |  |
| **Band Transects** |  |  |  |
| **Visual Fish Transects** |  |  |  |
| **Roving Diver Fish Count** |  |  |  |
| **Fish Size Frequency** |  |  |  |
| **Site (Video) Documentation** |  |  |  |
| **ARMS** |  |  |  |
| **Non-KFM** |  |  |  |
| **Species List** |  |  |  |

**SIZE FREQUENCY MEASURMENTS:** *Tegula regina* (60) \_\_\_\_\_\_

*Macrocystis pyrifera* (100)

*Tethya aurantia* (60)

*Stylaster californica* (50)

*Lophogorgia chilensis* (60)

*Muricea fruticosa* (60)

*Muricea californica* (60)

*Megathura crenulata* (60)

*Haliotis rufescens* (60)

*Haliotis corrugata* (60)

*Haliotis fulgens* (60)

*Kelletia kelletii* (60)

*Crassadoma gigantea* (60)

*Megastraea undosa* (60)

*Lithopoma gibberosa* (60)

*Lytechinus anamesus* (200)

*Pycnopodia helianthoides* (60)

*S. franciscanus* (200)

*S. purpuratus* (200)

*Patiria miniata* (60)

*Pisaster giganteus* (60)

**Version 1.0 2018**

|  |  |  |
| --- | --- | --- |
| **ABUNDANCE RATINGS** |  |  |
| X = present (no rating given) |  |  |
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| **NOTES** |  |  |
| j = juvenile |  |  |
| s = shell only |  |  |
| #/j# = (e.g. 2/j3 - adult abundance 2, juvenile abundance 3) | | |

**Algae NOTES:**

**Chlorophyta**

*Codium* spp. *\_\_\_\_\_\_\_\_*

*Derbesia* sp. *\_\_\_\_\_\_\_\_*

*Ulva* spp.  *\_\_\_\_\_\_\_\_*

Other green algae *\_\_\_\_\_\_\_\_*

**Phaeophyta**

*Agarum fimbriatum \_\_\_\_\_\_\_\_*

*Colpomenia* sp. *\_\_\_\_\_\_\_\_*

*Cystoseira* sp. *\_\_\_\_\_\_\_\_*

*Desmarestia* sp. *\_\_\_\_\_\_\_\_*

*Dictyoneuropsis \_\_\_\_\_\_\_\_*

*Dictyota/Pachydictyon\_\_\_\_\_\_\_*

*Dictyopteris* sp. *\_\_\_\_\_\_\_\_*

*Eisenia arborea \_\_\_\_\_\_\_\_*

*Laminaria farlowii \_\_\_\_\_\_\_\_*

*Macrocystis pyrifera \_\_\_\_\_\_\_\_*

*Pterygophora californica\_\_\_\_\_*

*Sargassum muticum \_\_\_\_\_\_\_\_*

*Sargassum horneri* *\_\_\_\_\_\_\_\_*

*Zonaria* sp. *\_\_\_\_\_\_\_\_*

Other brown algae *\_\_\_\_\_\_\_\_*

**Rhodophyta**

*Callophyllis* sp. *\_\_\_\_\_\_\_\_*

*Cryptopleura* spp. *\_\_\_\_\_\_\_\_*

*Gelidium* spp*. \_\_\_\_\_\_\_\_*

*Gigartina* spp*.* *\_\_\_\_\_\_\_\_*

*Laurencia* sp. *\_\_\_\_\_\_\_\_*

*Plocamium* sp. *\_\_\_\_\_\_\_\_*

*Rhodymenia* spp. *\_\_\_\_\_\_\_\_*

Articulated coralline \_*\_\_\_\_\_\_\_*

Encrusting coralline *\_\_\_\_\_\_\_\_*

Other red algae *\_\_\_\_\_\_\_\_*

Misc. plant *\_\_\_\_\_\_\_\_*

Bare rock \_\_\_\_\_\_\_\_

**Version 1.0 2018**

**Misc invert/CNId/SPONGE/Tun**

**PORIFERA NOTES:**Most common misc. invert:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*Haliclona* sp*. \_\_\_\_\_\_*

*Hymenamphiastra cyanocrypta\_\_\_\_*

*Polymastia* spp. *\_\_\_\_\_\_*

*Tethya aurantia \_\_\_\_\_\_*

Other Sponges *\_\_\_\_\_\_*

**ANTHOZOA**

*Anthopleura* spp. *\_\_\_\_\_\_*

*Astrangia lajollaensis \_\_\_\_\_\_*

*Balanophyllia* *elegans \_\_\_\_\_\_*

*Corynactis californica \_\_\_\_\_\_*

*Eugorgia rubens \_\_\_\_\_\_*

*Lophogorgia chilensis \_\_\_\_\_\_*

*Metridium* spp. *\_\_\_\_\_\_*

*Muricea californica \_\_\_\_\_\_*

*Muricea fruticosa \_\_\_\_\_\_*

*Sagartia/Cactosoma* spp. *\_\_\_\_\_\_*

*Urticina lofotensis \_\_\_\_\_\_*

*Urticina* spp. *\_\_\_\_\_\_*

**Hydrozoa**

Hydroid spp. *\_\_\_\_\_\_*

*Stylaster californicus \_\_\_\_\_\_*

**Annelida/Polychaeta**

*Chaetopterus* sp. *\_\_\_\_\_\_*

*Diopatra ornata \_\_\_\_\_\_*

*Dodecaceria* spp *\_\_\_\_\_\_*

*Phragmatopoma californica \_\_\_\_\_\_*

*Salmacina tribranchiata \_\_\_\_\_\_*

*Spirobranchus spinosus \_\_\_\_\_\_*

**Arthropoda/Crustacea**

*Balanus* sp. *\_\_\_\_\_\_*

*Cancer* sp. *\_\_\_\_\_\_*

*Panulirus interruptus \_\_\_\_\_\_*

**Bryozoa**

*Bugula* spp*. \_\_\_\_\_\_*

*Costazia costazii. \_\_\_\_\_\_*

*Watersipora* spp. *\_\_\_\_\_\_*

*Diaperoecia californica \_\_\_\_\_\_ Membranipora* spp. *\_\_\_\_\_\_*

Other Bryozoans *\_\_\_\_\_\_*

**Tunicates** *\_\_\_\_\_\_*

*Styela montereyensis \_\_\_\_\_\_*

**Misc. invertebrates** *\_\_\_\_\_\_*

**Molluscs** **NOTES:**

*Aplysia californica \_\_\_\_\_\_\_*

*Bursa californica* \_\_\_\_\_\_\_

*Crassadoma gigantea \_\_\_\_\_\_\_*

*Cryptochiton stelleri* \_\_\_\_\_\_\_

*Cypraea spadicea \_\_\_\_\_\_\_*

*Haliotis assimilis \_\_\_\_\_\_\_*

*Haliotis corrugata* \_\_\_\_\_\_\_

*Haliotis fulgens \_\_\_\_\_\_\_*

*Haliotis rufescens \_\_\_\_\_\_\_*

*Haliotis sorenseni* \_\_\_\_\_\_\_

*Kelletia kelletii \_\_\_\_\_\_\_*

*Lithopoma gibberosa* \_\_\_\_\_\_\_

*Megastraea undosa \_\_\_\_\_\_\_*

*Megathura crenulata \_\_\_\_\_\_\_*

*Octopus* spp. *\_\_\_\_\_\_\_*

*Serpulorbis squamigerus \_\_\_\_\_\_*

*Tegula regina \_\_\_\_\_\_\_*

**Version 1.0 2018**

**ECHINODERMS NOTES:**

*Centrostephanus coronatus \_\_\_\_\_\_*

*Cucumaria* sp. *\_\_\_\_\_\_*

*Dermasterias imbricata \_\_\_\_\_\_*

*Linckia* sp. *\_\_\_\_\_\_*

*Lytechinus anamesus \_\_\_\_\_\_*

*Ophiothrix spiculata \_\_\_\_\_\_*

*Pachythyone rubra \_\_\_\_\_\_*

*Parastichopus californicus \_\_\_\_\_\_*

*Parastichopus parvimensis \_\_\_\_\_\_*

*Patiria miniata \_\_\_\_\_\_*

*Pisaster giganteus \_\_\_\_\_\_*

*Pisaster ochraceus \_\_\_\_\_\_*

*Pycnopodia helianthoides \_\_\_\_\_\_*

*S. purpuratus**\_\_\_\_\_\_*

*S. franciscanus \_\_\_\_\_\_*

**Fish: NOTES:**

*Lythrypnus dalli \_\_\_\_\_\_*

*Coryphopterus nicholsii \_\_\_\_\_\_*

*Alloclinus holderi \_\_\_\_\_\_*

fish observed other than on rdfc or fish transects:

**Comments on ARMS:**

**Comments on Gear / Procedure / Transect/ Misc. obsevations:**

**Version 1.0 2018**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sampling Dates/Cruise#** |  |  | |  |  |
| **Wasting Disease** Urchins:  Stars: |  |  | |  |  |
| **Black Spot Disease** |  |  | |  |  |
| **Lead Line Condition:** |  |  | |  |  |
| **Percent Canopy Cover of**  ***Macrocystis pyrifera*** |  |  | |  |  |
| **Site Status** |  |  | |  |  |
| **# Fishing Lures Found** | **# Fishing Weights Found** | | **Notes:** | | |
| New: Old: | New: Old: | |  | | |

**TEMPERATURE LOGGER:**

|  |  |  |
| --- | --- | --- |
| **Date Deployed** | **Date Retrieved** | **Notes:** |
|  |  | See Temp. logger and site history forms |

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Participants** | **Date Completed** | **Notes** |
| **1 m Quadrats** |  |  |  |
| **5 m Quadrats** |  |  |  |
| **RPCs** |  |  |  |
| **Band Transects** |  |  |  |
| **Visual Fish Transects** |  |  |  |
| **Roving Diver Fish Count** |  |  |  |
| **Fish Size Frequency** |  |  |  |
| **Site (Video) Documentation** |  |  |  |
| **ARMS** |  |  |  |
| **Non-KFM** |  |  |  |
| **Species List** |  |  |  |

**SIZE FREQUENCY MEASURMENTS:** *Tegula regina* (60) \_\_\_\_\_\_

*Macrocystis pyrifera* (100)

*Tethya aurantia* (60)

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*Lophogorgia chilensis* (60)

*Muricea fruticosa* (60)

*Muricea californica* (60)

*Megathura crenulata* (60)

*Haliotis rufescens* (60)

*Haliotis corrugata* (60)

*Haliotis fulgens* (60)

*Kelletia kelletii* (60)

*Crassadoma gigantea* (60)

*Megastraea undosa* (60)

*Lithopoma gibberosa* (60)

*Lytechinus anamesus* (200)

*Pycnopodia helianthoides* (60)

*S. franciscanus* (200)

*S. purpuratus* (200)

*Patiria miniata* (60)

*Pisaster giganteus* (60)

**Version 1.0 2018**

|  |  |  |
| --- | --- | --- |
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| X = present (no rating given) |  |  |
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| **NOTES** |  |  |
| j = juvenile |  |  |
| s = shell only |  |  |
| #/j# = (e.g. 2/j3 - adult abundance 2, juvenile abundance 3) | | |

**Algae NOTES:**

**Chlorophyta**

*Codium* spp. *\_\_\_\_\_\_\_\_*

*Derbesia* sp. *\_\_\_\_\_\_\_\_*

*Ulva* spp.  *\_\_\_\_\_\_\_\_*

Other green algae *\_\_\_\_\_\_\_\_*

**Phaeophyta**

*Agarum fimbriatum \_\_\_\_\_\_\_\_*

*Colpomenia* sp. *\_\_\_\_\_\_\_\_*

*Cystoseira* sp. *\_\_\_\_\_\_\_\_*

*Desmarestia* sp. *\_\_\_\_\_\_\_\_*

*Dictyoneuropsis \_\_\_\_\_\_\_\_*

*Dictyota/Pachydictyon\_\_\_\_\_\_\_*

*Dictyopteris* sp. *\_\_\_\_\_\_\_\_*

*Eisenia arborea \_\_\_\_\_\_\_\_*

*Laminaria farlowii \_\_\_\_\_\_\_\_*

*Macrocystis pyrifera \_\_\_\_\_\_\_\_*

*Pterygophora californica\_\_\_\_\_*

*Sargassum muticum \_\_\_\_\_\_\_\_*

*Sargassum horneri* *\_\_\_\_\_\_\_\_*

*Zonaria* sp. *\_\_\_\_\_\_\_\_*

Other brown algae *\_\_\_\_\_\_\_\_*

**Rhodophyta**

*Callophyllis* sp. *\_\_\_\_\_\_\_\_*

*Cryptopleura* spp. *\_\_\_\_\_\_\_\_*

*Gelidium* spp*. \_\_\_\_\_\_\_\_*

*Gigartina* spp*.* *\_\_\_\_\_\_\_\_*

*Laurencia* sp. *\_\_\_\_\_\_\_\_*

*Plocamium* sp. *\_\_\_\_\_\_\_\_*

*Rhodymenia* spp. *\_\_\_\_\_\_\_\_*

Articulated coralline \_*\_\_\_\_\_\_\_*

Encrusting coralline *\_\_\_\_\_\_\_\_*

Other red algae *\_\_\_\_\_\_\_\_*

Misc. plant *\_\_\_\_\_\_\_\_*

Bare rock \_\_\_\_\_\_\_\_

**Version 1.0 2018**

**Misc invert/CNId/SPONGE/Tun**

**PORIFERA NOTES:**Most common misc. invert:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*Haliclona* sp*. \_\_\_\_\_\_*

*Hymenamphiastra cyanocrypta\_\_\_\_*

*Polymastia* spp. *\_\_\_\_\_\_*

*Tethya aurantia \_\_\_\_\_\_*

Other Sponges *\_\_\_\_\_\_*

**ANTHOZOA**

*Anthopleura* spp. *\_\_\_\_\_\_*

*Astrangia lajollaensis \_\_\_\_\_\_*

*Balanophyllia* *elegans \_\_\_\_\_\_*

*Corynactis californica \_\_\_\_\_\_*

*Eugorgia rubens \_\_\_\_\_\_*

*Lophogorgia chilensis \_\_\_\_\_\_*

*Metridium* spp. *\_\_\_\_\_\_*

*Muricea californica \_\_\_\_\_\_*

*Muricea fruticosa \_\_\_\_\_\_*

*Sagartia/Cactosoma* spp. *\_\_\_\_\_\_*

*Urticina lofotensis \_\_\_\_\_\_*

*Urticina* spp. *\_\_\_\_\_\_*

**Hydrozoa**

Hydroid spp. *\_\_\_\_\_\_*

*Stylaster californicus \_\_\_\_\_\_*

**Annelida/Polychaeta**

*Chaetopterus* sp. *\_\_\_\_\_\_*

*Diopatra ornata \_\_\_\_\_\_*

*Dodecaceria* spp *\_\_\_\_\_\_*

*Phragmatopoma californica \_\_\_\_\_\_*

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*Balanus* sp. *\_\_\_\_\_\_*

*Cancer* sp. *\_\_\_\_\_\_*

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**Bryozoa**

*Bugula* spp*. \_\_\_\_\_\_*

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*Diaperoecia californica \_\_\_\_\_\_ Membranipora* spp. *\_\_\_\_\_\_*

Other Bryozoans *\_\_\_\_\_\_*

**Tunicates** *\_\_\_\_\_\_*

*Styela montereyensis \_\_\_\_\_\_*

**Misc. invertebrates** *\_\_\_\_\_\_*

**Molluscs** **NOTES:**

*Aplysia californica \_\_\_\_\_\_\_*

*Bursa californica* \_\_\_\_\_\_\_

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*Cryptochiton stelleri* \_\_\_\_\_\_\_

*Cypraea spadicea \_\_\_\_\_\_\_*

*Haliotis assimilis \_\_\_\_\_\_\_*

*Haliotis corrugata* \_\_\_\_\_\_\_

*Haliotis fulgens \_\_\_\_\_\_\_*

*Haliotis rufescens \_\_\_\_\_\_\_*

*Haliotis sorenseni* \_\_\_\_\_\_\_

*Kelletia kelletii \_\_\_\_\_\_\_*

*Lithopoma gibberosa* \_\_\_\_\_\_\_

*Megastraea undosa \_\_\_\_\_\_\_*

*Megathura crenulata \_\_\_\_\_\_\_*

*Octopus* spp. *\_\_\_\_\_\_\_*

*Serpulorbis squamigerus \_\_\_\_\_\_*

*Tegula regina \_\_\_\_\_\_\_*

**Version 1.0 2018**

**ECHINODERMS NOTES:**

*Centrostephanus coronatus \_\_\_\_\_\_*

*Cucumaria* sp. *\_\_\_\_\_\_*

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*Linckia* sp. *\_\_\_\_\_\_*

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**Version 1.0 2018**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sampling Dates/Cruise#** |  |  | |  |  |
| **Wasting Disease** Urchins:  Stars: |  |  | |  |  |
| **Black Spot Disease** |  |  | |  |  |
| **Lead Line Condition:** |  |  | |  |  |
| **Percent Canopy Cover of**  ***Macrocystis pyrifera*** |  |  | |  |  |
| **Site Status** |  |  | |  |  |
| **# Fishing Lures Found** | **# Fishing Weights Found** | | **Notes:** | | |
| New: Old: | New: Old: | |  | | |

**TEMPERATURE LOGGER:**

|  |  |  |
| --- | --- | --- |
| **Date Deployed** | **Date Retrieved** | **Notes:** |
|  |  | See Temp. logger and site history forms |

|  |  |  |  |
| --- | --- | --- | --- |
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| **1 m Quadrats** |  |  |  |
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| **ARMS** |  |  |  |
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**Version 1.0 2018**

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**Algae NOTES:**

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*Derbesia* sp. *\_\_\_\_\_\_\_\_*

*Ulva* spp.  *\_\_\_\_\_\_\_\_*

Other green algae *\_\_\_\_\_\_\_\_*

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*Colpomenia* sp. *\_\_\_\_\_\_\_\_*

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*Desmarestia* sp. *\_\_\_\_\_\_\_\_*

*Dictyoneuropsis \_\_\_\_\_\_\_\_*

*Dictyota/Pachydictyon\_\_\_\_\_\_\_*

*Dictyopteris* sp. *\_\_\_\_\_\_\_\_*

*Eisenia arborea \_\_\_\_\_\_\_\_*

*Laminaria farlowii \_\_\_\_\_\_\_\_*

*Macrocystis pyrifera \_\_\_\_\_\_\_\_*

*Pterygophora californica\_\_\_\_\_*

*Sargassum muticum \_\_\_\_\_\_\_\_*

*Sargassum horneri* *\_\_\_\_\_\_\_\_*

*Zonaria* sp. *\_\_\_\_\_\_\_\_*

Other brown algae *\_\_\_\_\_\_\_\_*

**Rhodophyta**

*Callophyllis* sp. *\_\_\_\_\_\_\_\_*

*Cryptopleura* spp. *\_\_\_\_\_\_\_\_*

*Gelidium* spp*. \_\_\_\_\_\_\_\_*

*Gigartina* spp*.* *\_\_\_\_\_\_\_\_*

*Laurencia* sp. *\_\_\_\_\_\_\_\_*

*Plocamium* sp. *\_\_\_\_\_\_\_\_*

*Rhodymenia* spp. *\_\_\_\_\_\_\_\_*

Articulated coralline \_*\_\_\_\_\_\_\_*

Encrusting coralline *\_\_\_\_\_\_\_\_*

Other red algae *\_\_\_\_\_\_\_\_*

Misc. plant *\_\_\_\_\_\_\_\_*

Bare rock \_\_\_\_\_\_\_\_

**Version 1.0 2018**

**Misc invert/CNId/SPONGE/Tun**

**PORIFERA NOTES:**Most common misc. invert:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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Other Sponges *\_\_\_\_\_\_*

**ANTHOZOA**

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*Astrangia lajollaensis \_\_\_\_\_\_*

*Balanophyllia* *elegans \_\_\_\_\_\_*

*Corynactis californica \_\_\_\_\_\_*

*Eugorgia rubens \_\_\_\_\_\_*

*Lophogorgia chilensis \_\_\_\_\_\_*

*Metridium* spp. *\_\_\_\_\_\_*

*Muricea californica \_\_\_\_\_\_*

*Muricea fruticosa \_\_\_\_\_\_*

*Sagartia/Cactosoma* spp. *\_\_\_\_\_\_*

*Urticina lofotensis \_\_\_\_\_\_*

*Urticina* spp. *\_\_\_\_\_\_*

**Hydrozoa**

Hydroid spp. *\_\_\_\_\_\_*

*Stylaster californicus \_\_\_\_\_\_*

**Annelida/Polychaeta**

*Chaetopterus* sp. *\_\_\_\_\_\_*

*Diopatra ornata \_\_\_\_\_\_*

*Dodecaceria* spp *\_\_\_\_\_\_*

*Phragmatopoma californica \_\_\_\_\_\_*

*Salmacina tribranchiata \_\_\_\_\_\_*

*Spirobranchus spinosus \_\_\_\_\_\_*

**Arthropoda/Crustacea**

*Balanus* sp. *\_\_\_\_\_\_*

*Cancer* sp. *\_\_\_\_\_\_*

*Panulirus interruptus \_\_\_\_\_\_*

**Bryozoa**

*Bugula* spp*. \_\_\_\_\_\_*

*Costazia costazii. \_\_\_\_\_\_*

*Watersipora* spp. *\_\_\_\_\_\_*

*Diaperoecia californica \_\_\_\_\_\_ Membranipora* spp. *\_\_\_\_\_\_*

Other Bryozoans *\_\_\_\_\_\_*

**Tunicates** *\_\_\_\_\_\_*

*Styela montereyensis \_\_\_\_\_\_*

**Misc. invertebrates** *\_\_\_\_\_\_*

**Molluscs** **NOTES:**

*Aplysia californica \_\_\_\_\_\_\_*

*Bursa californica* \_\_\_\_\_\_\_

*Crassadoma gigantea \_\_\_\_\_\_\_*

*Cryptochiton stelleri* \_\_\_\_\_\_\_

*Cypraea spadicea \_\_\_\_\_\_\_*

*Haliotis assimilis \_\_\_\_\_\_\_*

*Haliotis corrugata* \_\_\_\_\_\_\_

*Haliotis fulgens \_\_\_\_\_\_\_*

*Haliotis rufescens \_\_\_\_\_\_\_*

*Haliotis sorenseni* \_\_\_\_\_\_\_

*Kelletia kelletii \_\_\_\_\_\_\_*

*Lithopoma gibberosa* \_\_\_\_\_\_\_

*Megastraea undosa \_\_\_\_\_\_\_*

*Megathura crenulata \_\_\_\_\_\_\_*

*Octopus* spp. *\_\_\_\_\_\_\_*

*Serpulorbis squamigerus \_\_\_\_\_\_*

*Tegula regina \_\_\_\_\_\_\_*

**Version 1.0 2018**

**ECHINODERMS NOTES:**

*Centrostephanus coronatus \_\_\_\_\_\_*

*Cucumaria* sp. *\_\_\_\_\_\_*

*Dermasterias imbricata \_\_\_\_\_\_*

*Linckia* sp. *\_\_\_\_\_\_*

*Lytechinus anamesus \_\_\_\_\_\_*

*Ophiothrix spiculata \_\_\_\_\_\_*

*Pachythyone rubra \_\_\_\_\_\_*

*Parastichopus californicus \_\_\_\_\_\_*

*Parastichopus parvimensis \_\_\_\_\_\_*

*Patiria miniata \_\_\_\_\_\_*

*Pisaster giganteus \_\_\_\_\_\_*

*Pisaster ochraceus \_\_\_\_\_\_*

*Pycnopodia helianthoides \_\_\_\_\_\_*

*S. purpuratus**\_\_\_\_\_\_*

*S. franciscanus \_\_\_\_\_\_*

**Fish: NOTES:**

*Lythrypnus dalli \_\_\_\_\_\_*

*Coryphopterus nicholsii \_\_\_\_\_\_*

*Alloclinus holderi \_\_\_\_\_\_*

fish observed other than on rdfc or fish transects:

**Comments on ARMS:**

**Comments on Gear / Procedure / Transect/ Misc. obsevations:**

**Version 1.0 2018**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sampling Dates/Cruise#** |  |  | |  |  |
| **Wasting Disease** Urchins:  Stars: |  |  | |  |  |
| **Black Spot Disease** |  |  | |  |  |
| **Lead Line Condition:** |  |  | |  |  |
| **Percent Canopy Cover of**  ***Macrocystis pyrifera*** |  |  | |  |  |
| **Site Status** |  |  | |  |  |
| **# Fishing Lures Found** | **# Fishing Weights Found** | | **Notes:** | | |
| New: Old: | New: Old: | |  | | |

**TEMPERATURE LOGGER:**

|  |  |  |
| --- | --- | --- |
| **Date Deployed** | **Date Retrieved** | **Notes:** |
|  |  | See Temp. logger and site history forms |

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Participants** | **Date Completed** | **Notes** |
| **1 m Quadrats** |  |  |  |
| **5 m Quadrats** |  |  |  |
| **RPCs** |  |  |  |
| **Band Transects** |  |  |  |
| **Visual Fish Transects** |  |  |  |
| **Roving Diver Fish Count** |  |  |  |
| **Fish Size Frequency** |  |  |  |
| **Site (Video) Documentation** |  |  |  |
| **ARMS** |  |  |  |
| **Non-KFM** |  |  |  |
| **Species List** |  |  |  |

**SIZE FREQUENCY MEASURMENTS:** *Tegula regina* (60) \_\_\_\_\_\_

*Macrocystis pyrifera* (100)

*Tethya aurantia* (60)

*Stylaster californica* (50)

*Lophogorgia chilensis* (60)

*Muricea fruticosa* (60)

*Muricea californica* (60)

*Megathura crenulata* (60)

*Haliotis rufescens* (60)

*Haliotis corrugata* (60)

*Haliotis fulgens* (60)

*Kelletia kelletii* (60)

*Crassadoma gigantea* (60)

*Megastraea undosa* (60)

*Lithopoma gibberosa* (60)

*Lytechinus anamesus* (200)

*Pycnopodia helianthoides* (60)

*S. franciscanus* (200)

*S. purpuratus* (200)

*Patiria miniata* (60)

*Pisaster giganteus* (60)

**Version 1.0 2018**

|  |  |  |
| --- | --- | --- |
| **ABUNDANCE RATINGS** |  |  |
| X = present (no rating given) |  |  |
| 0 = noticeably absent, an effort was made to look for an organism that was not found. | | |
| 1 = rare, few organisms found |  |  |
| 2 = present, organism found in moderate numbers | |  |
| 3 = common, organism found over most of the site or in high density patches | | |
| 4 = abundant, organism present in higher than normal densities | | |
| **NOTES** |  |  |
| j = juvenile |  |  |
| s = shell only |  |  |
| #/j# = (e.g. 2/j3 - adult abundance 2, juvenile abundance 3) | | |

**Algae NOTES:**

**Chlorophyta**

*Codium* spp. *\_\_\_\_\_\_\_\_*

*Derbesia* sp. *\_\_\_\_\_\_\_\_*

*Ulva* spp.  *\_\_\_\_\_\_\_\_*

Other green algae *\_\_\_\_\_\_\_\_*

**Phaeophyta**

*Agarum fimbriatum \_\_\_\_\_\_\_\_*

*Colpomenia* sp. *\_\_\_\_\_\_\_\_*

*Cystoseira* sp. *\_\_\_\_\_\_\_\_*

*Desmarestia* sp. *\_\_\_\_\_\_\_\_*

*Dictyoneuropsis \_\_\_\_\_\_\_\_*

*Dictyota/Pachydictyon\_\_\_\_\_\_\_*

*Dictyopteris* sp. *\_\_\_\_\_\_\_\_*

*Eisenia arborea \_\_\_\_\_\_\_\_*

*Laminaria farlowii \_\_\_\_\_\_\_\_*

*Macrocystis pyrifera \_\_\_\_\_\_\_\_*

*Pterygophora californica\_\_\_\_\_*

*Sargassum muticum \_\_\_\_\_\_\_\_*

*Sargassum horneri* *\_\_\_\_\_\_\_\_*

*Zonaria* sp. *\_\_\_\_\_\_\_\_*

Other brown algae *\_\_\_\_\_\_\_\_*

**Rhodophyta**

*Callophyllis* sp. *\_\_\_\_\_\_\_\_*

*Cryptopleura* spp. *\_\_\_\_\_\_\_\_*

*Gelidium* spp*. \_\_\_\_\_\_\_\_*

*Gigartina* spp*.* *\_\_\_\_\_\_\_\_*

*Laurencia* sp. *\_\_\_\_\_\_\_\_*

*Plocamium* sp. *\_\_\_\_\_\_\_\_*

*Rhodymenia* spp. *\_\_\_\_\_\_\_\_*

Articulated coralline \_*\_\_\_\_\_\_\_*

Encrusting coralline *\_\_\_\_\_\_\_\_*

Other red algae *\_\_\_\_\_\_\_\_*

Misc. plant *\_\_\_\_\_\_\_\_*

Bare rock \_\_\_\_\_\_\_\_

**Version 1.0 2018**

**Misc invert/CNId/SPONGE/Tun**

**PORIFERA NOTES:**Most common misc. invert:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*Haliclona* sp*. \_\_\_\_\_\_*

*Hymenamphiastra cyanocrypta\_\_\_\_*

*Polymastia* spp. *\_\_\_\_\_\_*

*Tethya aurantia \_\_\_\_\_\_*

Other Sponges *\_\_\_\_\_\_*

**ANTHOZOA**

*Anthopleura* spp. *\_\_\_\_\_\_*

*Astrangia lajollaensis \_\_\_\_\_\_*

*Balanophyllia* *elegans \_\_\_\_\_\_*

*Corynactis californica \_\_\_\_\_\_*

*Eugorgia rubens \_\_\_\_\_\_*

*Lophogorgia chilensis \_\_\_\_\_\_*

*Metridium* spp. *\_\_\_\_\_\_*

*Muricea californica \_\_\_\_\_\_*

*Muricea fruticosa \_\_\_\_\_\_*

*Sagartia/Cactosoma* spp. *\_\_\_\_\_\_*

*Urticina lofotensis \_\_\_\_\_\_*

*Urticina* spp. *\_\_\_\_\_\_*

**Hydrozoa**

Hydroid spp. *\_\_\_\_\_\_*

*Stylaster californicus \_\_\_\_\_\_*

**Annelida/Polychaeta**

*Chaetopterus* sp. *\_\_\_\_\_\_*

*Diopatra ornata \_\_\_\_\_\_*

*Dodecaceria* spp *\_\_\_\_\_\_*

*Phragmatopoma californica \_\_\_\_\_\_*

*Salmacina tribranchiata \_\_\_\_\_\_*

*Spirobranchus spinosus \_\_\_\_\_\_*

**Arthropoda/Crustacea**

*Balanus* sp. *\_\_\_\_\_\_*

*Cancer* sp. *\_\_\_\_\_\_*

*Panulirus interruptus \_\_\_\_\_\_*

**Bryozoa**

*Bugula* spp*. \_\_\_\_\_\_*

*Costazia costazii. \_\_\_\_\_\_*

*Watersipora* spp. *\_\_\_\_\_\_*

*Diaperoecia californica \_\_\_\_\_\_ Membranipora* spp. *\_\_\_\_\_\_*

Other Bryozoans *\_\_\_\_\_\_*

**Tunicates** *\_\_\_\_\_\_*

*Styela montereyensis \_\_\_\_\_\_*

**Misc. invertebrates** *\_\_\_\_\_\_*

**Molluscs** **NOTES:**

*Aplysia californica \_\_\_\_\_\_\_*

*Bursa californica* \_\_\_\_\_\_\_

*Crassadoma gigantea \_\_\_\_\_\_\_*

*Cryptochiton stelleri* \_\_\_\_\_\_\_

*Cypraea spadicea \_\_\_\_\_\_\_*

*Haliotis assimilis \_\_\_\_\_\_\_*

*Haliotis corrugata* \_\_\_\_\_\_\_

*Haliotis fulgens \_\_\_\_\_\_\_*

*Haliotis rufescens \_\_\_\_\_\_\_*

*Haliotis sorenseni* \_\_\_\_\_\_\_

*Kelletia kelletii \_\_\_\_\_\_\_*

*Lithopoma gibberosa* \_\_\_\_\_\_\_

*Megastraea undosa \_\_\_\_\_\_\_*

*Megathura crenulata \_\_\_\_\_\_\_*

*Octopus* spp. *\_\_\_\_\_\_\_*

*Serpulorbis squamigerus \_\_\_\_\_\_*

*Tegula regina \_\_\_\_\_\_\_*

**Version 1.0 2018**

**ECHINODERMS NOTES:**

*Centrostephanus coronatus \_\_\_\_\_\_*

*Cucumaria* sp. *\_\_\_\_\_\_*

*Dermasterias imbricata \_\_\_\_\_\_*

*Linckia* sp. *\_\_\_\_\_\_*

*Lytechinus anamesus \_\_\_\_\_\_*

*Ophiothrix spiculata \_\_\_\_\_\_*

*Pachythyone rubra \_\_\_\_\_\_*

*Parastichopus californicus \_\_\_\_\_\_*

*Parastichopus parvimensis \_\_\_\_\_\_*

*Patiria miniata \_\_\_\_\_\_*

*Pisaster giganteus \_\_\_\_\_\_*

*Pisaster ochraceus \_\_\_\_\_\_*

*Pycnopodia helianthoides \_\_\_\_\_\_*

*S. purpuratus**\_\_\_\_\_\_*

*S. franciscanus \_\_\_\_\_\_*

**Fish: NOTES:**

*Lythrypnus dalli \_\_\_\_\_\_*

*Coryphopterus nicholsii \_\_\_\_\_\_*

*Alloclinus holderi \_\_\_\_\_\_*

fish observed other than on rdfc or fish transects:

**Comments on ARMS:**

**Comments on Gear / Procedure / Transect/ Misc. obsevations:**

**Version 1.0 2018**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sampling Dates/Cruise#** |  |  | |  |  |
| **Wasting Disease** Urchins:  Stars: |  |  | |  |  |
| **Black Spot Disease** |  |  | |  |  |
| **Lead Line Condition:** |  |  | |  |  |
| **Percent Canopy Cover of**  ***Macrocystis pyrifera*** |  |  | |  |  |
| **Site Status** |  |  | |  |  |
| **# Fishing Lures Found** | **# Fishing Weights Found** | | **Notes:** | | |
| New: Old: | New: Old: | |  | | |

**TEMPERATURE LOGGER:**

|  |  |  |
| --- | --- | --- |
| **Date Deployed** | **Date Retrieved** | **Notes:** |
|  |  | See Temp. logger and site history forms |

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Participants** | **Date Completed** | **Notes** |
| **1 m Quadrats** |  |  |  |
| **5 m Quadrats** |  |  |  |
| **RPCs** |  |  |  |
| **Band Transects** |  |  |  |
| **Visual Fish Transects** |  |  |  |
| **Roving Diver Fish Count** |  |  |  |
| **Fish Size Frequency** |  |  |  |
| **Site (Video) Documentation** |  |  |  |
| **ARMS** |  |  |  |
| **Non-KFM** |  |  |  |
| **Species List** |  |  |  |

**SIZE FREQUENCY MEASURMENTS:** *Tegula regina* (60) \_\_\_\_\_\_

*Macrocystis pyrifera* (100)

*Tethya aurantia* (60)

*Stylaster californica* (50)

*Lophogorgia chilensis* (60)

*Muricea fruticosa* (60)

*Muricea californica* (60)

*Megathura crenulata* (60)

*Haliotis rufescens* (60)

*Haliotis corrugata* (60)

*Haliotis fulgens* (60)

*Kelletia kelletii* (60)

*Crassadoma gigantea* (60)

*Megastraea undosa* (60)

*Lithopoma gibberosa* (60)

*Lytechinus anamesus* (200)

*Pycnopodia helianthoides* (60)

*S. franciscanus* (200)

*S. purpuratus* (200)

*Patiria miniata* (60)

*Pisaster giganteus* (60)

**Version 1.0 2018**

|  |  |  |
| --- | --- | --- |
| **ABUNDANCE RATINGS** |  |  |
| X = present (no rating given) |  |  |
| 0 = noticeably absent, an effort was made to look for an organism that was not found. | | |
| 1 = rare, few organisms found |  |  |
| 2 = present, organism found in moderate numbers | |  |
| 3 = common, organism found over most of the site or in high density patches | | |
| 4 = abundant, organism present in higher than normal densities | | |
| **NOTES** |  |  |
| j = juvenile |  |  |
| s = shell only |  |  |
| #/j# = (e.g. 2/j3 - adult abundance 2, juvenile abundance 3) | | |

**Algae NOTES:**

**Chlorophyta**

*Codium* spp. *\_\_\_\_\_\_\_\_*

*Derbesia* sp. *\_\_\_\_\_\_\_\_*

*Ulva* spp.  *\_\_\_\_\_\_\_\_*

Other green algae *\_\_\_\_\_\_\_\_*

**Phaeophyta**

*Agarum fimbriatum \_\_\_\_\_\_\_\_*

*Colpomenia* sp. *\_\_\_\_\_\_\_\_*

*Cystoseira* sp. *\_\_\_\_\_\_\_\_*

*Desmarestia* sp. *\_\_\_\_\_\_\_\_*

*Dictyoneuropsis \_\_\_\_\_\_\_\_*

*Dictyota/Pachydictyon\_\_\_\_\_\_\_*

*Dictyopteris* sp. *\_\_\_\_\_\_\_\_*

*Eisenia arborea \_\_\_\_\_\_\_\_*

*Laminaria farlowii \_\_\_\_\_\_\_\_*

*Macrocystis pyrifera \_\_\_\_\_\_\_\_*

*Pterygophora californica\_\_\_\_\_*

*Sargassum muticum \_\_\_\_\_\_\_\_*

*Sargassum horneri* *\_\_\_\_\_\_\_\_*

*Zonaria* sp. *\_\_\_\_\_\_\_\_*

Other brown algae *\_\_\_\_\_\_\_\_*

**Rhodophyta**

*Callophyllis* sp. *\_\_\_\_\_\_\_\_*

*Cryptopleura* spp. *\_\_\_\_\_\_\_\_*

*Gelidium* spp*. \_\_\_\_\_\_\_\_*

*Gigartina* spp*.* *\_\_\_\_\_\_\_\_*

*Laurencia* sp. *\_\_\_\_\_\_\_\_*

*Plocamium* sp. *\_\_\_\_\_\_\_\_*

*Rhodymenia* spp. *\_\_\_\_\_\_\_\_*

Articulated coralline \_*\_\_\_\_\_\_\_*

Encrusting coralline *\_\_\_\_\_\_\_\_*

Other red algae *\_\_\_\_\_\_\_\_*

Misc. plant *\_\_\_\_\_\_\_\_*

Bare rock \_\_\_\_\_\_\_\_

**Version 1.0 2018**

**Misc invert/CNId/SPONGE/Tun**

**PORIFERA NOTES:**Most common misc. invert:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*Haliclona* sp*. \_\_\_\_\_\_*

*Hymenamphiastra cyanocrypta\_\_\_\_*

*Polymastia* spp. *\_\_\_\_\_\_*

*Tethya aurantia \_\_\_\_\_\_*

Other Sponges *\_\_\_\_\_\_*

**ANTHOZOA**

*Anthopleura* spp. *\_\_\_\_\_\_*

*Astrangia lajollaensis \_\_\_\_\_\_*

*Balanophyllia* *elegans \_\_\_\_\_\_*

*Corynactis californica \_\_\_\_\_\_*

*Eugorgia rubens \_\_\_\_\_\_*

*Lophogorgia chilensis \_\_\_\_\_\_*

*Metridium* spp. *\_\_\_\_\_\_*

*Muricea californica \_\_\_\_\_\_*

*Muricea fruticosa \_\_\_\_\_\_*

*Sagartia/Cactosoma* spp. *\_\_\_\_\_\_*

*Urticina lofotensis \_\_\_\_\_\_*

*Urticina* spp. *\_\_\_\_\_\_*

**Hydrozoa**

Hydroid spp. *\_\_\_\_\_\_*

*Stylaster californicus \_\_\_\_\_\_*

**Annelida/Polychaeta**

*Chaetopterus* sp. *\_\_\_\_\_\_*

*Diopatra ornata \_\_\_\_\_\_*

*Dodecaceria* spp *\_\_\_\_\_\_*

*Phragmatopoma californica \_\_\_\_\_\_*

*Salmacina tribranchiata \_\_\_\_\_\_*

*Spirobranchus spinosus \_\_\_\_\_\_*

**Arthropoda/Crustacea**

*Balanus* sp. *\_\_\_\_\_\_*

*Cancer* sp. *\_\_\_\_\_\_*

*Panulirus interruptus \_\_\_\_\_\_*

**Bryozoa**

*Bugula* spp*. \_\_\_\_\_\_*

*Costazia costazii. \_\_\_\_\_\_*

*Watersipora* spp. *\_\_\_\_\_\_*

*Diaperoecia californica \_\_\_\_\_\_ Membranipora* spp. *\_\_\_\_\_\_*

Other Bryozoans *\_\_\_\_\_\_*

**Tunicates** *\_\_\_\_\_\_*

*Styela montereyensis \_\_\_\_\_\_*

**Misc. invertebrates** *\_\_\_\_\_\_*

**Molluscs** **NOTES:**

*Aplysia californica \_\_\_\_\_\_\_*

*Bursa californica* \_\_\_\_\_\_\_

*Crassadoma gigantea \_\_\_\_\_\_\_*

*Cryptochiton stelleri* \_\_\_\_\_\_\_

*Cypraea spadicea \_\_\_\_\_\_\_*

*Haliotis assimilis \_\_\_\_\_\_\_*

*Haliotis corrugata* \_\_\_\_\_\_\_

*Haliotis fulgens \_\_\_\_\_\_\_*

*Haliotis rufescens \_\_\_\_\_\_\_*

*Haliotis sorenseni* \_\_\_\_\_\_\_

*Kelletia kelletii \_\_\_\_\_\_\_*

*Lithopoma gibberosa* \_\_\_\_\_\_\_

*Megastraea undosa \_\_\_\_\_\_\_*

*Megathura crenulata \_\_\_\_\_\_\_*

*Octopus* spp. *\_\_\_\_\_\_\_*

*Serpulorbis squamigerus \_\_\_\_\_\_*

*Tegula regina \_\_\_\_\_\_\_*

**Version 1.0 2018**

**ECHINODERMS NOTES:**

*Centrostephanus coronatus \_\_\_\_\_\_*

*Cucumaria* sp. *\_\_\_\_\_\_*

*Dermasterias imbricata \_\_\_\_\_\_*

*Linckia* sp. *\_\_\_\_\_\_*

*Lytechinus anamesus \_\_\_\_\_\_*

*Ophiothrix spiculata \_\_\_\_\_\_*

*Pachythyone rubra \_\_\_\_\_\_*

*Parastichopus californicus \_\_\_\_\_\_*

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*Patiria miniata \_\_\_\_\_\_*

*Pisaster giganteus \_\_\_\_\_\_*

*Pisaster ochraceus \_\_\_\_\_\_*

*Pycnopodia helianthoides \_\_\_\_\_\_*

*S. purpuratus**\_\_\_\_\_\_*

*S. franciscanus \_\_\_\_\_\_*

**Fish: NOTES:**

*Lythrypnus dalli \_\_\_\_\_\_*

*Coryphopterus nicholsii \_\_\_\_\_\_*

*Alloclinus holderi \_\_\_\_\_\_*

fish observed other than on rdfc or fish transects:

**Comments on ARMS:**

**Comments on Gear / Procedure / Transect/ Misc. obsevations:**

**Version 1.0 2018**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sampling Dates/Cruise#** |  |  | |  |  |
| **Wasting Disease** Urchins:  Stars: |  |  | |  |  |
| **Black Spot Disease** |  |  | |  |  |
| **Lead Line Condition:** |  |  | |  |  |
| **Percent Canopy Cover of**  ***Macrocystis pyrifera*** |  |  | |  |  |
| **Site Status** |  |  | |  |  |
| **# Fishing Lures Found** | **# Fishing Weights Found** | | **Notes:** | | |
| New: Old: | New: Old: | |  | | |

**TEMPERATURE LOGGER:**

|  |  |  |
| --- | --- | --- |
| **Date Deployed** | **Date Retrieved** | **Notes:** |
|  |  | See Temp. logger and site history forms |

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Participants** | **Date Completed** | **Notes** |
| **1 m Quadrats** |  |  |  |
| **5 m Quadrats** |  |  |  |
| **RPCs** |  |  |  |
| **Band Transects** |  |  |  |
| **Visual Fish Transects** |  |  |  |
| **Roving Diver Fish Count** |  |  |  |
| **Fish Size Frequency** |  |  |  |
| **Site (Video) Documentation** |  |  |  |
| **ARMS** |  |  |  |
| **Non-KFM** |  |  |  |
| **Species List** |  |  |  |

**SIZE FREQUENCY MEASURMENTS:** *Tegula regina* (60) \_\_\_\_\_\_

*Macrocystis pyrifera* (100)

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*S. purpuratus* (200)

*Patiria miniata* (60)

*Pisaster giganteus* (60)

**Version 1.0 2018**

|  |  |  |
| --- | --- | --- |
| **ABUNDANCE RATINGS** |  |  |
| X = present (no rating given) |  |  |
| 0 = noticeably absent, an effort was made to look for an organism that was not found. | | |
| 1 = rare, few organisms found |  |  |
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| **NOTES** |  |  |
| j = juvenile |  |  |
| s = shell only |  |  |
| #/j# = (e.g. 2/j3 - adult abundance 2, juvenile abundance 3) | | |

**Algae NOTES:**

**Chlorophyta**

*Codium* spp. *\_\_\_\_\_\_\_\_*

*Derbesia* sp. *\_\_\_\_\_\_\_\_*

*Ulva* spp.  *\_\_\_\_\_\_\_\_*

Other green algae *\_\_\_\_\_\_\_\_*

**Phaeophyta**

*Agarum fimbriatum \_\_\_\_\_\_\_\_*

*Colpomenia* sp. *\_\_\_\_\_\_\_\_*

*Cystoseira* sp. *\_\_\_\_\_\_\_\_*

*Desmarestia* sp. *\_\_\_\_\_\_\_\_*

*Dictyoneuropsis \_\_\_\_\_\_\_\_*

*Dictyota/Pachydictyon\_\_\_\_\_\_\_*

*Dictyopteris* sp. *\_\_\_\_\_\_\_\_*

*Eisenia arborea \_\_\_\_\_\_\_\_*

*Laminaria farlowii \_\_\_\_\_\_\_\_*

*Macrocystis pyrifera \_\_\_\_\_\_\_\_*

*Pterygophora californica\_\_\_\_\_*

*Sargassum muticum \_\_\_\_\_\_\_\_*

*Sargassum horneri* *\_\_\_\_\_\_\_\_*

*Zonaria* sp. *\_\_\_\_\_\_\_\_*

Other brown algae *\_\_\_\_\_\_\_\_*

**Rhodophyta**

*Callophyllis* sp. *\_\_\_\_\_\_\_\_*

*Cryptopleura* spp. *\_\_\_\_\_\_\_\_*

*Gelidium* spp*. \_\_\_\_\_\_\_\_*

*Gigartina* spp*.* *\_\_\_\_\_\_\_\_*

*Laurencia* sp. *\_\_\_\_\_\_\_\_*

*Plocamium* sp. *\_\_\_\_\_\_\_\_*

*Rhodymenia* spp. *\_\_\_\_\_\_\_\_*

Articulated coralline \_*\_\_\_\_\_\_\_*

Encrusting coralline *\_\_\_\_\_\_\_\_*

Other red algae *\_\_\_\_\_\_\_\_*

Misc. plant *\_\_\_\_\_\_\_\_*

Bare rock \_\_\_\_\_\_\_\_

**Version 1.0 2018**

**Misc invert/CNId/SPONGE/Tun**

**PORIFERA NOTES:**Most common misc. invert:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*Haliclona* sp*. \_\_\_\_\_\_*

*Hymenamphiastra cyanocrypta\_\_\_\_*

*Polymastia* spp. *\_\_\_\_\_\_*

*Tethya aurantia \_\_\_\_\_\_*

Other Sponges *\_\_\_\_\_\_*

**ANTHOZOA**

*Anthopleura* spp. *\_\_\_\_\_\_*

*Astrangia lajollaensis \_\_\_\_\_\_*

*Balanophyllia* *elegans \_\_\_\_\_\_*

*Corynactis californica \_\_\_\_\_\_*

*Eugorgia rubens \_\_\_\_\_\_*

*Lophogorgia chilensis \_\_\_\_\_\_*

*Metridium* spp. *\_\_\_\_\_\_*

*Muricea californica \_\_\_\_\_\_*

*Muricea fruticosa \_\_\_\_\_\_*

*Sagartia/Cactosoma* spp. *\_\_\_\_\_\_*

*Urticina lofotensis \_\_\_\_\_\_*

*Urticina* spp. *\_\_\_\_\_\_*

**Hydrozoa**

Hydroid spp. *\_\_\_\_\_\_*

*Stylaster californicus \_\_\_\_\_\_*

**Annelida/Polychaeta**

*Chaetopterus* sp. *\_\_\_\_\_\_*

*Diopatra ornata \_\_\_\_\_\_*

*Dodecaceria* spp *\_\_\_\_\_\_*

*Phragmatopoma californica \_\_\_\_\_\_*

*Salmacina tribranchiata \_\_\_\_\_\_*

*Spirobranchus spinosus \_\_\_\_\_\_*

**Arthropoda/Crustacea**

*Balanus* sp. *\_\_\_\_\_\_*

*Cancer* sp. *\_\_\_\_\_\_*

*Panulirus interruptus \_\_\_\_\_\_*

**Bryozoa**

*Bugula* spp*. \_\_\_\_\_\_*

*Costazia costazii. \_\_\_\_\_\_*

*Watersipora* spp. *\_\_\_\_\_\_*

*Diaperoecia californica \_\_\_\_\_\_ Membranipora* spp. *\_\_\_\_\_\_*

Other Bryozoans *\_\_\_\_\_\_*

**Tunicates** *\_\_\_\_\_\_*

*Styela montereyensis \_\_\_\_\_\_*

**Misc. invertebrates** *\_\_\_\_\_\_*

**Molluscs** **NOTES:**

*Aplysia californica \_\_\_\_\_\_\_*

*Bursa californica* \_\_\_\_\_\_\_

*Crassadoma gigantea \_\_\_\_\_\_\_*

*Cryptochiton stelleri* \_\_\_\_\_\_\_

*Cypraea spadicea \_\_\_\_\_\_\_*

*Haliotis assimilis \_\_\_\_\_\_\_*

*Haliotis corrugata* \_\_\_\_\_\_\_

*Haliotis fulgens \_\_\_\_\_\_\_*

*Haliotis rufescens \_\_\_\_\_\_\_*

*Haliotis sorenseni* \_\_\_\_\_\_\_

*Kelletia kelletii \_\_\_\_\_\_\_*

*Lithopoma gibberosa* \_\_\_\_\_\_\_

*Megastraea undosa \_\_\_\_\_\_\_*

*Megathura crenulata \_\_\_\_\_\_\_*

*Octopus* spp. *\_\_\_\_\_\_\_*

*Serpulorbis squamigerus \_\_\_\_\_\_*

*Tegula regina \_\_\_\_\_\_\_*

**Version 1.0 2018**

**ECHINODERMS NOTES:**

*Centrostephanus coronatus \_\_\_\_\_\_*

*Cucumaria* sp. *\_\_\_\_\_\_*

*Dermasterias imbricata \_\_\_\_\_\_*

*Linckia* sp. *\_\_\_\_\_\_*

*Lytechinus anamesus \_\_\_\_\_\_*

*Ophiothrix spiculata \_\_\_\_\_\_*

*Pachythyone rubra \_\_\_\_\_\_*

*Parastichopus californicus \_\_\_\_\_\_*

*Parastichopus parvimensis \_\_\_\_\_\_*

*Patiria miniata \_\_\_\_\_\_*

*Pisaster giganteus \_\_\_\_\_\_*

*Pisaster ochraceus \_\_\_\_\_\_*

*Pycnopodia helianthoides \_\_\_\_\_\_*

*S. purpuratus**\_\_\_\_\_\_*

*S. franciscanus \_\_\_\_\_\_*

**Fish: NOTES:**

*Lythrypnus dalli \_\_\_\_\_\_*

*Coryphopterus nicholsii \_\_\_\_\_\_*

*Alloclinus holderi \_\_\_\_\_\_*

fish observed other than on rdfc or fish transects:

**Comments on ARMS:**

**Comments on Gear / Procedure / Transect/ Misc. obsevations:**

**Version 1.0 2018**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sampling Dates/Cruise#** |  |  | |  |  |
| **Wasting Disease** Urchins:  Stars: |  |  | |  |  |
| **Black Spot Disease** |  |  | |  |  |
| **Lead Line Condition:** |  |  | |  |  |
| **Percent Canopy Cover of**  ***Macrocystis pyrifera*** |  |  | |  |  |
| **Site Status** |  |  | |  |  |
| **# Fishing Lures Found** | **# Fishing Weights Found** | | **Notes:** | | |
| New: Old: | New: Old: | |  | | |

**TEMPERATURE LOGGER:**

|  |  |  |
| --- | --- | --- |
| **Date Deployed** | **Date Retrieved** | **Notes:** |
|  |  | See Temp. logger and site history forms |

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Participants** | **Date Completed** | **Notes** |
| **1 m Quadrats** |  |  |  |
| **5 m Quadrats** |  |  |  |
| **RPCs** |  |  |  |
| **Band Transects** |  |  |  |
| **Visual Fish Transects** |  |  |  |
| **Roving Diver Fish Count** |  |  |  |
| **Fish Size Frequency** |  |  |  |
| **Site (Video) Documentation** |  |  |  |
| **ARMS** |  |  |  |
| **Non-KFM** |  |  |  |
| **Species List** |  |  |  |

**SIZE FREQUENCY MEASURMENTS:** *Tegula regina* (60) \_\_\_\_\_\_

*Macrocystis pyrifera* (100)

*Tethya aurantia* (60)

*Stylaster californica* (50)

*Lophogorgia chilensis* (60)

*Muricea fruticosa* (60)

*Muricea californica* (60)

*Megathura crenulata* (60)

*Haliotis rufescens* (60)

*Haliotis corrugata* (60)

*Haliotis fulgens* (60)

*Kelletia kelletii* (60)

*Crassadoma gigantea* (60)

*Megastraea undosa* (60)

*Lithopoma gibberosa* (60)

*Lytechinus anamesus* (200)

*Pycnopodia helianthoides* (60)

*S. franciscanus* (200)

*S. purpuratus* (200)

*Patiria miniata* (60)

*Pisaster giganteus* (60)

**Version 1.0 2018**

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| --- | --- | --- |
| **ABUNDANCE RATINGS** |  |  |
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| **NOTES** |  |  |
| j = juvenile |  |  |
| s = shell only |  |  |
| #/j# = (e.g. 2/j3 - adult abundance 2, juvenile abundance 3) | | |

**Algae NOTES:**

**Chlorophyta**

*Codium* spp. *\_\_\_\_\_\_\_\_*

*Derbesia* sp. *\_\_\_\_\_\_\_\_*

*Ulva* spp.  *\_\_\_\_\_\_\_\_*

Other green algae *\_\_\_\_\_\_\_\_*

**Phaeophyta**

*Agarum fimbriatum \_\_\_\_\_\_\_\_*

*Colpomenia* sp. *\_\_\_\_\_\_\_\_*

*Cystoseira* sp. *\_\_\_\_\_\_\_\_*

*Desmarestia* sp. *\_\_\_\_\_\_\_\_*

*Dictyoneuropsis \_\_\_\_\_\_\_\_*

*Dictyota/Pachydictyon\_\_\_\_\_\_\_*

*Dictyopteris* sp. *\_\_\_\_\_\_\_\_*

*Eisenia arborea \_\_\_\_\_\_\_\_*

*Laminaria farlowii \_\_\_\_\_\_\_\_*

*Macrocystis pyrifera \_\_\_\_\_\_\_\_*

*Pterygophora californica\_\_\_\_\_*

*Sargassum muticum \_\_\_\_\_\_\_\_*

*Sargassum horneri* *\_\_\_\_\_\_\_\_*

*Zonaria* sp. *\_\_\_\_\_\_\_\_*

Other brown algae *\_\_\_\_\_\_\_\_*

**Rhodophyta**

*Callophyllis* sp. *\_\_\_\_\_\_\_\_*

*Cryptopleura* spp. *\_\_\_\_\_\_\_\_*

*Gelidium* spp*. \_\_\_\_\_\_\_\_*

*Gigartina* spp*.* *\_\_\_\_\_\_\_\_*

*Laurencia* sp. *\_\_\_\_\_\_\_\_*

*Plocamium* sp. *\_\_\_\_\_\_\_\_*

*Rhodymenia* spp. *\_\_\_\_\_\_\_\_*

Articulated coralline \_*\_\_\_\_\_\_\_*

Encrusting coralline *\_\_\_\_\_\_\_\_*

Other red algae *\_\_\_\_\_\_\_\_*

Misc. plant *\_\_\_\_\_\_\_\_*

Bare rock \_\_\_\_\_\_\_\_

**Version 1.0 2018**

**Misc invert/CNId/SPONGE/Tun**

**PORIFERA NOTES:**Most common misc. invert:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*Haliclona* sp*. \_\_\_\_\_\_*

*Hymenamphiastra cyanocrypta\_\_\_\_*

*Polymastia* spp. *\_\_\_\_\_\_*

*Tethya aurantia \_\_\_\_\_\_*

Other Sponges *\_\_\_\_\_\_*

**ANTHOZOA**

*Anthopleura* spp. *\_\_\_\_\_\_*

*Astrangia lajollaensis \_\_\_\_\_\_*

*Balanophyllia* *elegans \_\_\_\_\_\_*

*Corynactis californica \_\_\_\_\_\_*

*Eugorgia rubens \_\_\_\_\_\_*

*Lophogorgia chilensis \_\_\_\_\_\_*

*Metridium* spp. *\_\_\_\_\_\_*

*Muricea californica \_\_\_\_\_\_*

*Muricea fruticosa \_\_\_\_\_\_*

*Sagartia/Cactosoma* spp. *\_\_\_\_\_\_*

*Urticina lofotensis \_\_\_\_\_\_*

*Urticina* spp. *\_\_\_\_\_\_*

**Hydrozoa**

Hydroid spp. *\_\_\_\_\_\_*

*Stylaster californicus \_\_\_\_\_\_*

**Annelida/Polychaeta**

*Chaetopterus* sp. *\_\_\_\_\_\_*

*Diopatra ornata \_\_\_\_\_\_*

*Dodecaceria* spp *\_\_\_\_\_\_*

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Other Bryozoans *\_\_\_\_\_\_*

**Tunicates** *\_\_\_\_\_\_*

*Styela montereyensis \_\_\_\_\_\_*

**Misc. invertebrates** *\_\_\_\_\_\_*

**Molluscs** **NOTES:**

*Aplysia californica \_\_\_\_\_\_\_*

*Bursa californica \_*\_\_\_\_\_\_

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*Cryptochiton stelleri \_*\_\_\_\_\_\_

*Cypraea spadicea \_\_\_\_\_\_\_*

*Haliotis assimilis \_\_\_\_\_\_\_*

*Haliotis corrugata* \_\_\_\_\_\_\_

*Haliotis fulgens \_\_\_\_\_\_\_*

*Haliotis rufescens \_\_\_\_\_\_\_*

*Haliotis sorenseni* \_\_\_\_\_\_\_

*Kelletia kelletii \_\_\_\_\_\_\_*

*Lithopoma gibberosa* \_\_\_\_\_\_\_

*Megastraea undosa \_\_\_\_\_\_\_*

*Megathura crenulata \_\_\_\_\_\_\_*

*Octopus* spp. *\_\_\_\_\_\_\_*

*Serpulorbis squamigerus \_\_\_\_\_\_*

*Tegula regina \_\_\_\_\_\_\_*

**Version 1.0 2018**

**ECHINODERMS NOTES:**

*Centrostephanus coronatus \_\_\_\_\_\_*

*Cucumaria* sp. *\_\_\_\_\_\_*

*Dermasterias imbricata \_\_\_\_\_\_*

*Linckia* sp. *\_\_\_\_\_\_*

*Lytechinus anamesus \_\_\_\_\_\_*

*Ophiothrix spiculata \_\_\_\_\_\_*

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**Fish: NOTES:**

*Lythrypnus dalli \_\_\_\_\_\_*

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**Version 1.0 2018**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sampling Dates/Cruise#** |  |  | |  |  |
| **Wasting Disease** Urchins:  Stars: |  |  | |  |  |
| **Black Spot Disease** |  |  | |  |  |
| **Lead Line Condition:** |  |  | |  |  |
| **Percent Canopy Cover of**  ***Macrocystis pyrifera*** |  |  | |  |  |
| **Site Status** |  |  | |  |  |
| **# Fishing Lures Found** | **# Fishing Weights Found** | | **Notes:** | | |
| New: Old: | New: Old: | |  | | |

**TEMPERATURE LOGGER:**

|  |  |  |
| --- | --- | --- |
| **Date Deployed** | **Date Retrieved** | **Notes:** |
|  |  | See Temp. logger and site history forms |

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| --- | --- | --- | --- |
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| **Roving Diver Fish Count** |  |  |  |
| **Fish Size Frequency** |  |  |  |
| **Site (Video) Documentation** |  |  |  |
| **ARMS** |  |  |  |
| **Non-KFM** |  |  |  |
| **Species List** |  |  |  |

**SIZE FREQUENCY MEASURMENTS:** *Tegula regina* (60) \_\_\_\_\_\_

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*Megathura crenulata* (60)

*Haliotis rufescens* (60)

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**Version 1.0 2018**

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**Algae NOTES:**

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*Derbesia* sp. *\_\_\_\_\_\_\_\_*

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Other green algae *\_\_\_\_\_\_\_\_*

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*Dictyoneuropsis \_\_\_\_\_\_\_\_*

*Dictyota/Pachydictyon\_\_\_\_\_\_\_*

*Dictyopteris* sp. *\_\_\_\_\_\_\_\_*

*Eisenia arborea \_\_\_\_\_\_\_\_*

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*Macrocystis pyrifera \_\_\_\_\_\_\_\_*

*Pterygophora californica\_\_\_\_\_*

*Sargassum muticum \_\_\_\_\_\_\_\_*

*Sargassum horneri* *\_\_\_\_\_\_\_\_*

*Zonaria* sp. *\_\_\_\_\_\_\_\_*

Other brown algae *\_\_\_\_\_\_\_\_*

**Rhodophyta**

*Callophyllis* sp. *\_\_\_\_\_\_\_\_*

*Cryptopleura* spp. *\_\_\_\_\_\_\_\_*

*Gelidium* spp*. \_\_\_\_\_\_\_\_*

*Gigartina* spp*.* *\_\_\_\_\_\_\_\_*

*Laurencia* sp. *\_\_\_\_\_\_\_\_*

*Plocamium* sp. *\_\_\_\_\_\_\_\_*

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Articulated coralline \_*\_\_\_\_\_\_\_*

Encrusting coralline *\_\_\_\_\_\_\_\_*

Other red algae *\_\_\_\_\_\_\_\_*

Misc. plant *\_\_\_\_\_\_\_\_*

Bare rock \_\_\_\_\_\_\_\_

**Version 1.0 2018**

**Misc invert/CNId/SPONGE/Tun**

**PORIFERA NOTES:**Most common misc. invert:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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Other Sponges *\_\_\_\_\_\_*

**ANTHOZOA**

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*Urticina* spp. *\_\_\_\_\_\_*

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Hydroid spp. *\_\_\_\_\_\_*

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*Bugula* spp*. \_\_\_\_\_\_*

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Other Bryozoans *\_\_\_\_\_\_*

**Tunicates** *\_\_\_\_\_\_*

*Styela montereyensis \_\_\_\_\_\_*

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**Molluscs** **NOTES:**

*Aplysia californica \_\_\_\_\_\_\_*

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*Octopus* spp. *\_\_\_\_\_\_\_*

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*Tegula regina \_\_\_\_\_\_\_*

**Version 1.0 2018**

**ECHINODERMS NOTES:**

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*Lytechinus anamesus \_\_\_\_\_\_*

*Ophiothrix spiculata \_\_\_\_\_\_*

*Pachythyone rubra \_\_\_\_\_\_*

*Parastichopus californicus \_\_\_\_\_\_*

*Parastichopus parvimensis \_\_\_\_\_\_*

*Patiria miniata \_\_\_\_\_\_*

*Pisaster giganteus \_\_\_\_\_\_*

*Pisaster ochraceus \_\_\_\_\_\_*

*Pycnopodia helianthoides \_\_\_\_\_\_*

*S. purpuratus**\_\_\_\_\_\_*

*S. franciscanus \_\_\_\_\_\_*

**Fish: NOTES:**

*Lythrypnus dalli \_\_\_\_\_\_*

*Coryphopterus nicholsii \_\_\_\_\_\_*

*Alloclinus holderi \_\_\_\_\_\_*

fish observed other than on rdfc or fish transects:

**Comments on ARMS:**

**Comments on Gear / Procedure / Transect/ Misc. obsevations:**

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|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sampling Dates/Cruise#** |  |  | |  |  |
| **Wasting Disease** Urchins:  Stars: |  |  | |  |  |
| **Black Spot Disease** |  |  | |  |  |
| **Lead Line Condition:** |  |  | |  |  |
| **Percent Canopy Cover of**  ***Macrocystis pyrifera*** |  |  | |  |  |
| **Site Status** |  |  | |  |  |
| **# Fishing Lures Found** | **# Fishing Weights Found** | | **Notes:** | | |
| New: Old: | New: Old: | |  | | |

**TEMPERATURE LOGGER:**

|  |  |  |
| --- | --- | --- |
| **Date Deployed** | **Date Retrieved** | **Notes:** |
|  |  | See Temp. logger and site history forms |

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Participants** | **Date Completed** | **Notes** |
| **1 m Quadrats** |  |  |  |
| **5 m Quadrats** |  |  |  |
| **RPCs** |  |  |  |
| **Band Transects** |  |  |  |
| **Visual Fish Transects** |  |  |  |
| **Roving Diver Fish Count** |  |  |  |
| **Fish Size Frequency** |  |  |  |
| **Site (Video) Documentation** |  |  |  |
| **ARMS** |  |  |  |
| **Non-KFM** |  |  |  |
| **Species List** |  |  |  |

**SIZE FREQUENCY MEASURMENTS:** *Tegula regina* (60) \_\_\_\_\_\_

*Macrocystis pyrifera* (100)

*Tethya aurantia* (60)

*Stylaster californica* (50)

*Lophogorgia chilensis* (60)

*Muricea fruticosa* (60)

*Muricea californica* (60)

*Megathura crenulata* (60)

*Haliotis rufescens* (60)

*Haliotis corrugata* (60)

*Haliotis fulgens* (60)

*Kelletia kelletii* (60)

*Crassadoma gigantea* (60)

*Megastraea undosa* (60)

*Lithopoma gibberosa* (60)

*Lytechinus anamesus* (200)

*Pycnopodia helianthoides* (60)

*S. franciscanus* (200)

*S. purpuratus* (200)

*Patiria miniata* (60)

*Pisaster giganteus* (60)

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|  |  |  |
| --- | --- | --- |
| **ABUNDANCE RATINGS** |  |  |
| X = present (no rating given) |  |  |
| 0 = noticeably absent, an effort was made to look for an organism that was not found. | | |
| 1 = rare, few organisms found |  |  |
| 2 = present, organism found in moderate numbers | |  |
| 3 = common, organism found over most of the site or in high density patches | | |
| 4 = abundant, organism present in higher than normal densities | | |
| **NOTES** |  |  |
| j = juvenile |  |  |
| s = shell only |  |  |
| #/j# = (e.g. 2/j3 - adult abundance 2, juvenile abundance 3) | | |

**Algae NOTES:**

**Chlorophyta**

*Codium* spp. *\_\_\_\_\_\_\_\_*

*Derbesia* sp. *\_\_\_\_\_\_\_\_*

*Ulva* spp.  *\_\_\_\_\_\_\_\_*

Other green algae *\_\_\_\_\_\_\_\_*

**Phaeophyta**

*Agarum fimbriatum \_\_\_\_\_\_\_\_*

*Colpomenia* sp. *\_\_\_\_\_\_\_\_*

*Cystoseira* sp. *\_\_\_\_\_\_\_\_*

*Desmarestia* sp. *\_\_\_\_\_\_\_\_*

*Dictyoneuropsis \_\_\_\_\_\_\_\_*

*Dictyota/Pachydictyon\_\_\_\_\_\_\_*

*Dictyopteris* sp. *\_\_\_\_\_\_\_\_*

*Eisenia arborea \_\_\_\_\_\_\_\_*

*Laminaria farlowii \_\_\_\_\_\_\_\_*

*Macrocystis pyrifera \_\_\_\_\_\_\_\_*

*Pterygophora californica\_\_\_\_\_*

*Sargassum muticum \_\_\_\_\_\_\_\_*

*Sargassum horneri* *\_\_\_\_\_\_\_\_*

*Zonaria* sp. *\_\_\_\_\_\_\_\_*

Other brown algae *\_\_\_\_\_\_\_\_*

**Rhodophyta**

*Callophyllis* sp. *\_\_\_\_\_\_\_\_*

*Cryptopleura* spp. *\_\_\_\_\_\_\_\_*

*Gelidium* spp*. \_\_\_\_\_\_\_\_*

*Gigartina* spp*.* *\_\_\_\_\_\_\_\_*

*Laurencia* sp. *\_\_\_\_\_\_\_\_*

*Plocamium* sp. *\_\_\_\_\_\_\_\_*

*Rhodymenia* spp. *\_\_\_\_\_\_\_\_*

Articulated coralline \_*\_\_\_\_\_\_\_*

Encrusting coralline *\_\_\_\_\_\_\_\_*

Other red algae *\_\_\_\_\_\_\_\_*

Misc. plant *\_\_\_\_\_\_\_\_*

Bare rock \_\_\_\_\_\_\_\_

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**Misc invert/CNId/SPONGE/Tun**

**PORIFERA NOTES:**Most common misc. invert:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*Haliclona* sp*. \_\_\_\_\_\_*

*Hymenamphiastra cyanocrypta\_\_\_\_*

*Polymastia* spp. *\_\_\_\_\_\_*

*Tethya aurantia \_\_\_\_\_\_*

Other Sponges *\_\_\_\_\_\_*

**ANTHOZOA**

*Anthopleura* spp. *\_\_\_\_\_\_*

*Astrangia lajollaensis \_\_\_\_\_\_*

*Balanophyllia* *elegans \_\_\_\_\_\_*

*Corynactis californica \_\_\_\_\_\_*

*Eugorgia rubens \_\_\_\_\_\_*

*Lophogorgia chilensis \_\_\_\_\_\_*

*Metridium* spp. *\_\_\_\_\_\_*

*Muricea californica \_\_\_\_\_\_*

*Muricea fruticosa \_\_\_\_\_\_*

*Sagartia/Cactosoma* spp. *\_\_\_\_\_\_*

*Urticina lofotensis \_\_\_\_\_\_*

*Urticina* spp. *\_\_\_\_\_\_*

**Hydrozoa**

Hydroid spp. *\_\_\_\_\_\_*

*Stylaster californicus \_\_\_\_\_\_*

**Annelida/Polychaeta**

*Chaetopterus* sp. *\_\_\_\_\_\_*

*Diopatra ornata \_\_\_\_\_\_*

*Dodecaceria* spp *\_\_\_\_\_\_*

*Phragmatopoma californica \_\_\_\_\_\_*

*Salmacina tribranchiata \_\_\_\_\_\_*

*Spirobranchus spinosus \_\_\_\_\_\_*

**Arthropoda/Crustacea**

*Balanus* sp. *\_\_\_\_\_\_*

*Cancer* sp. *\_\_\_\_\_\_*

*Panulirus interruptus \_\_\_\_\_\_*

**Bryozoa**

*Bugula* spp*. \_\_\_\_\_\_*

*Costazia costazii. \_\_\_\_\_\_*

*Watersipora* spp. *\_\_\_\_\_\_*

*Diaperoecia californica \_\_\_\_\_\_ Membranipora* spp. *\_\_\_\_\_\_*

Other Bryozoans *\_\_\_\_\_\_*

**Tunicates** *\_\_\_\_\_\_*

*Styela montereyensis \_\_\_\_\_\_*

**Misc. invertebrates** *\_\_\_\_\_\_*

**Molluscs** **NOTES:**

*Aplysia californica \_\_\_\_\_\_\_*

*Bursa californica \_*\_\_\_\_\_\_

*Crassadoma gigantea \_\_\_\_\_\_\_*

*Cryptochiton stelleri* \_\_\_\_\_\_\_

*Cypraea spadicea \_\_\_\_\_\_\_*

*Haliotis assimilis \_\_\_\_\_\_\_*

*Haliotis corrugata* \_\_\_\_\_\_\_

*Haliotis fulgens \_\_\_\_\_\_\_*

*Haliotis rufescens \_\_\_\_\_\_\_*

*Haliotis sorenseni* \_\_\_\_\_\_\_

*Kelletia kelletii \_\_\_\_\_\_\_*

*Lithopoma gibberosa* \_\_\_\_\_\_\_

*Megastraea undosa \_\_\_\_\_\_\_*

*Megathura crenulata \_\_\_\_\_\_\_*

*Octopus* spp. *\_\_\_\_\_\_\_*

*Serpulorbis squamigerus \_\_\_\_\_\_*

*Tegula regina*

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**ECHINODERMS NOTES:**

*Centrostephanus coronatus \_\_\_\_\_\_*

*Cucumaria* sp. *\_\_\_\_\_\_*

*Dermasterias imbricata \_\_\_\_\_\_*

*Linckia* sp. *\_\_\_\_\_\_*

*Lytechinus anamesus \_\_\_\_\_\_*

*Ophiothrix spiculata \_\_\_\_\_\_*

*Pachythyone rubra \_\_\_\_\_\_*

*Parastichopus californicus \_\_\_\_\_\_*

*Parastichopus parvimensis \_\_\_\_\_\_*

*Patiria miniata \_\_\_\_\_\_*

*Pisaster giganteus \_\_\_\_\_\_*

*Pisaster ochraceus \_\_\_\_\_\_*

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*S. purpuratus**\_\_\_\_\_\_*

*S. franciscanus \_\_\_\_\_\_*

**Fish: NOTES:**

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*Coryphopterus nicholsii \_\_\_\_\_\_*

*Alloclinus holderi \_\_\_\_\_\_*

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