

Comments on the Wildlife (Protection) Act Amendment Bill 2021

Submitted to
The Parliamentary Standing Committee on Science and
Technology, Environment, Forests and Climate Change
Parliament of India

13 January 2022

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Comments on the Wildlife (Protection) Act amendment 2021

On invertebrates and aquatic species along with comments on definitions and other provisions.

| Subject | WPA 1972 | WPA 2021 bill | Comments by ZOO |
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| Definition of 'Scheduled animal' | 'scheduled animal' means an animal specified for the time being in Sch. I or Part II of Sch. II | 'scheduled animal' means an animal specified for the time being in Sch. I | Suggestion: Rename 'scheduled animal' as 'Schedule I animal' |
| Definition of 'Wildlife' | "wildlife" includes any animal, bees butterflies, crustacean, fish and moths; and aquatic or land vegetation which forms part of any habitat | No amendments suggested | Suggested definition: Wildlife includes any species or taxa from the animal kingdom and plant kingdom. |
| Definition of 'wild animal' | "wild animal" means any animal found wild in nature and includes any animal specified in Schedule I, Schedule II, Schedule, IV or Schedule V, wherever found | No amendments suggested | Suggested definition: Any native animal found wild in nature (not including feral animals or escaped domestic animals) and those listed under Schedules I, II, and IV |
| Definition of 'Invasive alien species' | Not defined | "invasive alien species" means a species of animal or plant which is not native to India and whose introduction or spread may threaten or adversely impact wildlife or its habitat | Suggested definition: An alien species is a species introduced outside its natural past or present distribution; if the species becomes problematic ecologically or its spread may threaten or adversely impact wildlife or its habitat, it is termed an invasive alien species. This should be at the bio-geographical level (E.g., Western Ghats or Himalaya) and not at the political level (i.e., Country-wise or State-wise). |

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| Vermin | “vermin” means any wild animal specified in Sch.V. Section 62 - Declaration of certain wild animal to be vermin. - The Central Government may by notification, declare any wild animal other than those specified in Sch. I and part II of Schedule II to be vermin for any area and for such period as may be specified therein and so long as such notification is in force, such wild animal shall be deemed to have been included in Sch.V. | "vermin" means any wild animal notified under section 62. Declaration of certain wild animal to be vermin. - [8The Central Government] may by notification, declare any wild animal other than those specified in Sch. I to be vermin for any area and for such period as may be specified therein. | The category/ term vermin must be deleted. Chapter III on hunting of wild animals specifically section 11 with all its subsections and clauses should take care of problem animals. |
| Nomenclature (Scientific names of species, subspecies, genera and/or family) | Outdated, with spelling mistakes, and other typographical errors. | Outdated, with spelling mistakes, and other typographical errors. | Needs to be modified and updated as per current scientific names |
| Provision for dynamism in the WPA for updating nomenclature, systematics, and taxonomic changes proposed by taxonomists. | Does not have the provision, making the lists outdated and prone to various interpretations. | Does not address this issue yet again and continues to complicate the interpretation. | The amendment requires the provisions for taxonomic / nomenclatural changes that keep the list scientifically current, dynamic, and therefore less prone to misinterpretations. |
| Wildlife Schedules | No clear rationale on species listed in Schedules I, II, III, IV, V and VI. | No clear rationale on species listed in Schedules I, II and III. | Needs a clear rationale for listing species in different schedules for better understanding and transparency based on science and policy. |

Invertebrate list from the Wildlife (Protection) Act Amendment Bill 2021

CORALS (Schedule I – Part H)

1. The WPA amendment lists 388 corals of which only 246 are actually present in India, **115 species are not present in India** and **there are no data available on 05 species**.
2. Of the 246 species present in India, **19 species have incorrect scientific names**.

The following Table summarises the details of the corals listed under Schedule I, Part H of the WPA amendment bill 2021 with the corrections and comments based on World Register of Marine Species (WoRMS database) and Ocean Biodiversity Information System (OBIS database).

| SI No | Scientific name_WPA Amendment Bill 2021 | Correct name | Comments |
|-------|---|-----------------------------------|--|
| 1 | <i>Acropora abrotanoides</i> | <i>Acropora abrotanoides</i> | Not present in India |
| 2 | <i>Acropora anthocersis</i> | <i>Acropora anthocersis</i> | Not present in India |
| 3 | <i>Acropora aspera</i> | <i>Acropora aspera</i> | Present in India |
| 4 | <i>Acropora austera</i> | <i>Acropora austera</i> | Not present in India |
| 5 | <i>Acropora awi</i> | <i>Acropora awi</i> | Present in India |
| 6 | <i>Acropora brueggemanni</i> | <i>Isopora brueggemanni</i> | Genus name incorrect, not present in India |
| 7 | <i>Acropora carduus</i> | <i>Acropora carduus</i> | Not present in India |
| 8 | <i>Acropora caroloniana</i> | <i>Acropora caroliniana</i> | Species spelling incorrect, not present in India |
| 9 | <i>Acropora cerealis</i> | <i>Acropora cerealis</i> | Not present in India |
| 10 | <i>Acropora chesterfieldensis</i> | <i>Acropora chesterfieldensis</i> | Present in India |
| 11 | <i>Acropora clathrata</i> | <i>Acropora clathrata</i> | Not present in India |
| 12 | <i>Acropora cophodactyla</i> | <i>Acropora cophodactyla</i> | Not present in India, validity of taxon in question |
| 13 | <i>Acropora copiosa</i> | <i>Acropora muricata</i> | Species name is unaccepted (synonymy), Present in India |
| 14 | <i>Acropora cytherea</i> | <i>Acropora cytherea</i> | Present in India |
| 15 | <i>Acropora desatwii</i> | <i>Acropora desalwii</i> | Species spelling in incorrect, not present in India |
| 16 | <i>Acropora digitifera</i> | <i>Acropora digitifera</i> | Present in India |
| 17 | <i>Acropora divaricata</i> | <i>Acropora divaricata</i> | Present in India |
| 18 | <i>Acropora efforescens</i> | <i>Acropora cytherea</i> | Species name is unaccepted (synonymy), Present in India |
| 19 | <i>Acropora fastigata</i> | <i>Acropora fastigata</i> | Not present in India |
| 20 | <i>Acropora florida</i> | <i>Acropora florida</i> | Present in India |
| 21 | <i>Acropora formosa</i> | <i>Acropora muricata</i> | Species name is unaccepted (synonymy), repeated list, Present in India |
| 22 | <i>Acropora forskali</i> | <i>Acropora forskali</i> | Present in India, validity of taxon in question |

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| 23 | <i>Acropora gemmifera</i> | <i>Acropora gemmifera</i> | Not present in India |
| 24 | <i>Acropora glauca</i> | <i>Acropora glauca</i> | Not present in India |
| 25 | <i>Acropora globiceps</i> | <i>Acropora globiceps</i> | Not present in India |
| 26 | <i>Acropora gomezi</i> | <i>Acropora gomezi</i> | |
| 27 | <i>Acropora grandis</i> | <i>Acropora grandis</i> | Not present in India |
| 28 | <i>Acropora granulosa</i> | <i>Acropora granulosa</i> | Present in India |
| 29 | <i>Acropora haimeii</i> | <i>Acropora haimeii</i> | Not present in India, validity of taxon in question |
| 30 | <i>Acropora hemprichii</i> | <i>Acropora hemprichii</i> | Present in India |
| 31 | <i>Acropora horrida</i> | <i>Acropora horrida</i> | Not present in India |
| 32 | <i>Acropora humilis</i> | <i>Acropora humilis</i> | Present in India |
| 33 | <i>Acropora hyacinthus</i> | <i>Acropora hyacinthus</i> | Present in India |
| 34 | <i>Acropora inermis</i> | <i>Acropora microphthalma</i> | Species name is unaccepted (synonymy), Present in India |
| 35 | <i>Acropora insignis</i> | <i>Acropora selago</i> | Species name is unaccepted (synonymy), Present in India |
| 36 | <i>Acropora kimbeensis</i> | <i>Acropora kimbeensis</i> | Not present in India |
| 37 | <i>Acropora latistella</i> | <i>Acropora latistella</i> | Not present in India |
| 38 | <i>Acropora longicyathus</i> | <i>Acropora longicyathus</i> | Not present in India |
| 39 | <i>Acropora loripes</i> | <i>Acropora loripes</i> | Not present in India |
| 40 | <i>Acropora lutkeni</i> | <i>Acropora lutkeni</i> | Not present in India |
| 41 | <i>Acropora massawensis</i> | <i>Acropora polystoma</i> | Species name is unaccepted (synonymy), not present in India |
| 42 | <i>Acroporamicroclados</i> | <i>Acropora microclados</i> | Not present in India |
| 43 | <i>Acropora microphthalma</i> | <i>Acropora microphthalma</i> | Species spelling in incorrect, repeated species, present in India |
| 44 | <i>Acropora millepora</i> | <i>Acropora millepora</i> | Present in India |
| 45 | <i>Acropora mirabilis</i> | <i>Acropora mirabilis</i> | Not present in India, validity of taxon in question |
| 46 | <i>Acropora monticulosa</i> | <i>Acropora monticulosa</i> | Present in India |
| 47 | <i>Acropora multiacuta</i> | <i>Acropora multiacuta</i> | Present in India |
| 48 | <i>Acropora nana</i> | <i>Acropora nana</i> | Not present in India |
| 49 | <i>Acropora nasuta</i> | <i>Acropora nasuta</i> | Present in India |
| 50 | <i>Acropora natalensis</i> | <i>Acropora natalensis</i> | Not present in India |
| 51 | <i>Acropora nobilis</i> | <i>Acropora robusta</i> | Species name is unaccepted (synonymy), Present in India |
| 52 | <i>Acropora ocellata</i> | <i>Acropora humilis</i> | Species name is unaccepted (synonymy), Present in India |
| 53 | <i>Acropora palifera</i> | <i>Isopora palifera</i> | Genus name incorrect, present in India |
| 54 | <i>Acropora palmerae</i> | <i>Acropora palmerae</i> | Not present in India |
| 55 | <i>Acropora papillare</i> | <i>Acropora papillare</i> | Not present in India |

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| 56 | <i>Acropora pharaonis</i> | <i>Acropora pharaonis</i> | Present in India |
| 57 | <i>Acropora plantaginea</i> | <i>Acropora plantaginea</i> | Not present in India, validity of taxon in question |
| 58 | <i>Acropora polystoma</i> | <i>Acropora polystoma</i> | Not present in India |
| 59 | <i>Acropora pulchra</i> | <i>Acropora pulchra</i> | Present in India |
| 60 | <i>Acropora robusta</i> | <i>Acropora robusta</i> | Repeated species, present in India |
| 61 | <i>Acropora roseni</i> | <i>Acropora roseni</i> | Not present in India |
| 62 | <i>Acropora rudis</i> | <i>Acropora rudis</i> | Not present in India |
| 63 | <i>Acropora samoensis</i> | <i>Acropora samoensis</i> | Not present in India |
| 64 | <i>Acropora schmitti</i> | <i>Acropora digitifera</i> | Species name is unaccepted (synonymy), Present in India |
| 65 | <i>Acropora secale</i> | <i>Acropora secale</i> | Present in India |
| 66 | <i>Acropora selago</i> | <i>Acropora selago</i> | Present in India |
| 67 | <i>Acropora solitaryensis</i> | <i>Acropora solitaryensis</i> | Not present in India |
| 68 | <i>Acropora spicifera</i> | <i>Acropora spicifera</i> | Present in India |
| 69 | <i>Acropora squarrosa</i> | <i>Acropora squarrosa</i> | Present in India |
| 70 | <i>Acropora striata</i> | <i>Acropora striata</i> | Not present in India |
| 71 | <i>Acropora subglabra</i> | <i>Acropora subglabra</i> | Not present in India |
| 72 | <i>Acropora subulata</i> | <i>Acropora subulata</i> | Not present in India |
| 73 | <i>Acropora tanegashimensis</i> | <i>Acropora tanegashimensis</i> | Not present in India |
| 74 | <i>Acropora tenuis</i> | <i>Acropora tenuis</i> | Not present in India |
| 75 | <i>Acropora teres</i> | <i>Acropora teres</i> | Present in India, validity of taxon in question |
| 76 | <i>Acropora torresiana</i> | <i>Acropora samoensis</i> | Species name is unaccepted (synonymy), not present in India |
| 77 | <i>Acropora tutuilensis</i> | <i>Acropora abrotanoides</i> | Species name is unaccepted (synonymy), present in India |
| 78 | <i>Acropora valenciennesi</i> | <i>Acropora valenciennesi</i> | Present in India |
| 79 | <i>Acropora valida</i> | <i>Acropora valida</i> | Present in India |
| 80 | <i>Acropora variolosa</i> | <i>Acropora variolosa</i> | Not present in India |
| 81 | <i>Acropora vaughani</i> | <i>Acropora vaughani</i> | Not present in India |
| 82 | <i>Acropora verweyi</i> | <i>Acropora verweyi</i> | Not present in India |
| 83 | <i>Acropora wallaceae</i> | <i>Acropora samoensis</i> | Species name is unaccepted (synonymy), not present in India |
| 84 | <i>Acropora yongei</i> | <i>Acropora yongei</i> | Not present in India |
| 85 | <i>Astreoporacucullata</i> | <i>Astreopora cucullata</i> | Not present in India |
| 86 | <i>Astreoporagracilis</i> | <i>Astreopora gracilis</i> | Present in India |
| 87 | <i>Astreoporalisteri</i> | <i>Astreopora listeri</i> | Present in India |
| 88 | <i>Astreoporamyriophthalma</i> | <i>Astreopora myriophthalma</i> | Present in India |
| 89 | <i>Astreoporasuggesta</i> | <i>Astreopora suggesta</i> | Not present in India |

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| 90 | <i>Montiporaaquituberculata</i> | <i>Montipora aequituberculata</i> | Present in India |
| 91 | <i>Montiporacaliculata</i> | <i>Montipora caliculata</i> | Not present in India |
| 92 | <i>Montipora capitata</i> | <i>Montipora capitata</i> | Present in India |
| 93 | <i>Montiporacebuensis</i> | <i>Montipora cebuensis</i> | Not present in India |
| 94 | <i>Montiporadanae</i> | <i>Montipora danae</i> | Present in India |
| 95 | <i>Montiporadelicatula</i> | <i>Montipora delicatula</i> | Not present in India |
| 96 | <i>Montipora digitata</i> | <i>Montipora digitata</i> | Present in India |
| 97 | <i>Montiporafoliola</i> | <i>Montipora foliosa</i> | Present in India |
| 98 | <i>Montipora grisea</i> | <i>Montipora grisea</i> | Not present in India |
| 99 | <i>Montiporahemispherica</i> | <i>Montipora hemispherica</i> | Not present in India |
| 100 | <i>Montiporahispida</i> | <i>Montipora hispida</i> | Present in India |
| 101 | <i>Montiporainformis</i> | <i>Montipora informis</i> | Present in India |
| 102 | <i>Montiporameandrina</i> | <i>Montipora maeandrina</i> | Present in India |
| 103 | <i>Montiporamollis</i> | <i>Montipora mollis</i> | Present in India |
| 104 | <i>Montiporamonasteriata</i> | <i>Montipora monasteriata</i> | Present in India |
| 105 | <i>Montiporapeltiformis</i> | <i>Montipora peltiformis</i> | Present in India |
| 106 | <i>Montiporatuberculosa</i> | <i>Montipora tuberculosa</i> | Present in India |
| 107 | <i>Montiporaturgescens</i> | <i>Montipora turgescens</i> | Present in India |
| 108 | <i>Montiporavenosa</i> | <i>Montipora venosa</i> | Present in India |
| 109 | <i>Montiporaverrilli</i> | <i>Montipora verrill</i> | Present in India |
| 110 | <i>Montiporaverrucosa</i> | <i>Montipora verrucosa</i> | Present in India |
| 111 | <i>Montiporaverruculosus</i> | <i>Montipora verruculosa</i> | Present in India |
| 112 | <i>Montiporavietnamensis</i> | <i>Montipora vietnamensis</i> | Present in India |
| 113 | <i>Gardineroseris plannulata</i> | <i>Gardineroseris planulata</i> | Present in India |
| 114 | <i>Leptoseris cucullata</i> | <i>Helioseris cucullata</i> | Not present in India |
| 115 | <i>Leptoseris explanata</i> | <i>Leptoseris explanata</i> | Present in India |
| 116 | <i>Leptoseris hawaiiensis</i> | <i>Leptoseris hawaiiensis</i> | Present in India |
| 117 | <i>Leptoseris incrustans</i> | <i>Leptoseris incrustans</i> | Present in India |
| 118 | <i>Leptoseris mycetoseoides</i> | <i>Leptoseris mycetoseroides</i> | Present in India |
| 119 | <i>Leptoseris papyracea</i> | <i>Leptoseris papyracea</i> | Present in India |
| 120 | <i>Leptoseris scabra</i> | <i>Leptoseris scabra</i> | Present in India |
| 121 | <i>Pachyseris gemmae</i> | <i>Pachyseris gemmae</i> | Present in India |
| 122 | <i>Pachyseris foliosa</i> | <i>Pachyseris foliosa</i> | Not present in India |
| 123 | <i>Pachyseris rugosa</i> | <i>Pachyseris rugosa</i> | Present in India |
| 124 | <i>Pachyseris speciosa</i> | <i>Pachyseris speciosa</i> | Present in India |
| 125 | <i>Pavona bipartite</i> | <i>Pavona bipartita</i> | Present in India |
| 126 | <i>Pavona cactus</i> | <i>Pavona cactus</i> | Present in India |
| 127 | <i>Pavona clavus</i> | <i>Pavona clavus</i> | Present in India |
| 128 | <i>Pavona decussata</i> | <i>Pavona decussata</i> | Present in India |
| 129 | <i>Pavona duerdeni</i> | <i>Pavona duerdeni</i> | Present in India |

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|-----|---------------------------------|---------------------------------|---|
| 130 | <i>Pavona explanulata</i> | <i>Pavona explanulata</i> | Present in India |
| 131 | <i>Pavona gigantea</i> | <i>Pavona gigantea</i> | Not present in India |
| 132 | <i>Pavona minuta</i> | <i>Pavona minuta</i> | Present in India |
| 133 | <i>Pavona varians</i> | <i>Pavona varians</i> | Present in India |
| 134 | <i>Pavona venosa</i> | <i>Pavona venosa</i> | Present in India |
| 135 | <i>Madracis kirbyi</i> | <i>Madracis kirbyi</i> | Not present in India |
| 136 | <i>Styloceniella armata</i> | <i>Stylocoeniella armata</i> | Present in India |
| 137 | <i>Styloceniella guentheri</i> | <i>Stylocoeniella guentheri</i> | Present in India |
| 138 | <i>Dendrophyllia robusta</i> | <i>Dendrophyllia robusta</i> | Not present in India |
| 139 | <i>Tubastrea coccinea</i> | <i>Tubastraea coccinea</i> | Present in India |
| 140 | <i>Tubastrea diaphana</i> | <i>Tubastraea diaphana</i> | Not present in India |
| 141 | <i>Tubastrea micranthus</i> | <i>Tubastraea micranthus</i> | Present in India |
| 142 | <i>Turbinaria mesenterina</i> | <i>Turbinaria mesenterina</i> | present in India |
| 143 | <i>Turbinaria peltata</i> | <i>Duncanopsammia peltata</i> | Genus name is unaccepted (synonymy), present in india |
| 144 | <i>Turbinaria reniformis</i> | <i>Turbinaria reniformis</i> | Present in India |
| 145 | <i>Turbinaria stellulata</i> | <i>Turbinaria stellulata</i> | Present in India |
| 146 | <i>Euphyllia ancora</i> | <i>Fimbriaphyllia ancora</i> | Genus name is unaccepted (synonymy), present in india |
| 147 | <i>Euphyllia divisa</i> | <i>Fimbriaphyllia divisa</i> | Genus name is unaccepted (synonymy), present in india |
| 148 | <i>Euphyllia glabrescens</i> | <i>Euphyllia glabrescens</i> | Present in India |
| 149 | <i>Physogyra lichtensteini</i> | <i>Physogyra lichtensteini</i> | Present in India |
| 150 | <i>Pleurogyra sinulosa</i> | <i>Plerogyra sinuosa</i> | Present in India |
| 151 | <i>Barabattoia amicornum</i> | <i>Dipsastraea amicornum</i> | Genus name is unaccepted (synonymy), present in india |
| 152 | <i>Barabattoia laddi</i> | <i>Dipsastraea laddi</i> | Genus name is unaccepted (synonymy), present in india |
| 153 | <i>Cyphastrea japonica</i> | <i>Cyphastrea japonica</i> | Present in India |
| 154 | <i>Cyphastrea microphthalma</i> | <i>Cyphastrea microphthalma</i> | Present in India |
| 155 | <i>Cyphastrea ocellina</i> | <i>Cyphastrea ocellina</i> | Present in India |
| 156 | <i>Cyphastrea serailia</i> | <i>Cyphastrea serailia</i> | Present in India |
| 157 | <i>Diploastrea helipora</i> | <i>Diploastrea heliopora</i> | Present in India |
| 158 | <i>Diploria strigosa</i> | <i>Pseudodiploria strigosa</i> | Genus name is unaccepted (synonymy), present in india |
| 159 | <i>Echinopora fruticulosa</i> | <i>Echinopora fruticulosa</i> | Present in India |
| 160 | <i>Echinopora gemmacea</i> | <i>Echinopora gemmacea</i> | Present in India |
| 161 | <i>Echinopora horrida</i> | <i>Echinopora horrida</i> | Present in India |
| 162 | <i>Echinopora lamellosa</i> | <i>Echinopora lamellosa</i> | Present in India |
| 163 | <i>Favia albidus</i> | <i>Dipsastraea albida</i> | Genus name is unaccepted (synonymy), present in india |
| 164 | <i>Favia fava</i> | <i>Dipsastraea fava</i> | Genus name is unaccepted (synonymy), present in india |

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|-----|--------------------------------|------------------------------------|---|
| 165 | <i>Favia helianthoides</i> | <i>Dipsastraea helianthoides</i> | Genus name is unaccepted (synonymy), present in india |
| 166 | <i>Favia lacuna</i> | <i>Dipsastraea lacuna</i> | Genus name is unaccepted (synonymy), present in india |
| 167 | <i>Favia matthaii</i> | <i>Dipsastraea matthaii</i> | Genus name is unaccepted (synonymy), present in india |
| 168 | <i>Favia danae</i> | <i>Dipsastraea danai</i> | Genus name is unaccepted (synonymy), present in india |
| 169 | <i>Favia maxima</i> | <i>Astraeosmilia maxima</i> | Not present in India |
| 170 | <i>Favia lizardensis</i> | <i>Dipsastraea lizardensis</i> | Genus name is unaccepted (synonymy), present in india |
| 171 | <i>Favia pallida</i> | <i>Dipsastraea pallida</i> | Genus name is unaccepted (synonymy), present in india |
| 172 | <i>Favia speciosa</i> | <i>Dipsastraea speciosa</i> | Genus name is unaccepted (synonymy), present in india |
| 173 | <i>Favia stelligera</i> | <i>Goniastrea stelligera</i> | Genus name is unaccepted (synonymy), present in india |
| 174 | <i>Favia truncatus</i> | <i>Dipsastraea truncata</i> | Genus name is unaccepted (synonymy), present in india |
| 175 | <i>Favites abdita</i> | <i>Dipsastraea truncata</i> | Genus name is unaccepted (synonymy), present in india |
| 176 | <i>Favites acuticollis</i> | <i>Favites acuticollis</i> | Present in India |
| 177 | <i>Favites chinensis</i> | <i>Favites chinensis</i> | Present in India |
| 178 | <i>Favites complanata</i> | <i>Favites complanata</i> | Present in India |
| 179 | <i>Favites flexuosa</i> | <i>Favites flexuosa</i> | Present in India |
| 180 | <i>Favites halicora</i> | <i>Favites halicora</i> | Present in India |
| 181 | <i>Favites micropentagona</i> | <i>Favites micropentagonus</i> | Present in India |
| 182 | <i>Favites spinosa</i> | <i>Favites spinosa</i> | Present in India |
| 183 | <i>Favites pentagona</i> | <i>Favites pentagona</i> | Present in India |
| 184 | <i>Favites vasta</i> | <i>Favites vasta</i> | Present in India |
| 185 | <i>Goniastrea aspera</i> | <i>Coelastrea aspera</i> | Genus name is unaccepted (synonymy), present in india |
| 186 | <i>Goniastrea australensis</i> | <i>Paragoniastrea australensis</i> | Genus name is unaccepted (synonymy), present in india |
| 187 | <i>Goniastrea edwardsi</i> | <i>Goniastrea edwardsi</i> | Present in India |
| 188 | <i>Goniastrea minuta</i> | <i>Goniastrea minuta</i> | Present in India |
| 189 | <i>Goniastrea peresi</i> | <i>Paramontastraea peresi</i> | Genus name is unaccepted (synonymy), present in india |
| 190 | <i>Goniastrea pectinata</i> | <i>Goniastrea pectinata</i> | Present in India |
| 191 | <i>Goniastrea retiformis</i> | <i>Goniastrea retiformis</i> | Present in India |
| 192 | <i>Leptoria irregularis</i> | <i>Leptoria irregularis</i> | Present in India |
| 193 | <i>Leptoria phrygia</i> | <i>Leptoria phrygia</i> | Present in India |
| 194 | <i>Leptastrea purpurea</i> | <i>Leptastrea purpurea</i> | Present in India |
| 195 | <i>Leptastrea transversa</i> | <i>Leptastrea transversa</i> | Present in India |

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| 196 | <i>Montastrea annuligera</i> | <i>Astrea annuligera</i> | Genus name is unaccepted (synonymy), present in india |
| 197 | <i>Montastrea colemani</i> | <i>Favites colemani</i> | Genus name is unaccepted (synonymy), present in india |
| 198 | <i>Montastrea curta</i> | <i>Astrea curta</i> | Genus name is unaccepted (synonymy), present in india |
| 199 | <i>Montastrea valenciennesi</i> | <i>Favites valenciennesii</i> | Genus name is unaccepted (synonymy), present in india |
| 200 | <i>Oulophyllia bennettae</i> | <i>Oulophyllia bennettae</i> | Present in India |
| 201 | <i>Oulophyllia crispa</i> | <i>Oulophyllia crispa</i> | Present in India |
| 202 | <i>Oulophyllia levis</i> | <i>Oulophyllia levis</i> | Present in India |
| 203 | <i>Oulastrea crispata</i> | <i>Oulastrea crispata</i> | Present in India |
| 204 | <i>Platygyra acuta</i> | <i>Platygyra acuta</i> | Present in India |
| 205 | <i>Platygyra daedalea</i> | <i>Platygyra daedalea</i> | Present in India |
| 206 | <i>Platygyra lamellina</i> | <i>Platygyra lamellina</i> | Present in India |
| 207 | <i>Platygyra verweyi</i> | <i>Platygyra verweyi</i> | Present in India |
| 208 | <i>Platygyra pini</i> | <i>Platygyra sinensis</i> | Species name is unaccepted (synonymy), present in india |
| 209 | <i>Platygyra sinensis</i> | <i>Platygyra sinensis</i> | Present in India, repeated species |
| 210 | <i>Cycloseris costulata</i> | <i>Cycloseris costulata</i> | Present in India |
| 211 | <i>Cycloseris cyclolites</i> | <i>Cycloseris cyclolites</i> | present in India |
| 212 | <i>Cycloseris hexagonalis</i> | <i>Sinuorota hexagonalis</i> | Genus name is unaccepted (synonymy), present in india |
| 213 | <i>Cycloseris patelliformis</i> | <i>Cycloseris fragilis</i> | Species name is unaccepted (synonymy), present in india |
| 214 | <i>Cycloseris sinensis</i> | <i>Cycloseris sinensis</i> | present in India |
| 215 | <i>Cycloseris somervillei</i> | <i>Cycloseris somervillei</i> | present in India |
| 216 | <i>Ctenactis crassa</i> | <i>Ctenactis crassa</i> | present in India |
| 217 | <i>Ctenactis albitentaculata</i> | <i>Ctenactis albitentaculata</i> | Not present in India |
| 218 | <i>Ctenactis echinata</i> | <i>Ctenactis echinata</i> | present in India |
| 219 | <i>Diaseris distorta</i> | <i>Cycloseris distorta</i> | present in India |
| 220 | <i>Fungia concinna</i> | <i>Lithophyllon concinna</i> | present in India |
| 221 | <i>Fungia corona</i> | <i>Danafungia scruposa</i> | Complete name change, present in India |
| 222 | <i>Fungia danai</i> | <i>Danafungia horrida</i> | Complete name change, present in India |
| 223 | <i>Fungia fralinae</i> | <i>Heliofungia fralinae</i> | Genus name is unaccepted (synonymy), present in india |
| 224 | <i>Fungia fungites</i> | <i>Fungia fungites</i> | present in India |
| 225 | <i>Fungia granulosa</i> | <i>Pleuractis granulosa</i> | Genus name is unaccepted (synonymy), present in india |
| 226 | <i>Fungia horrida</i> | <i>Danafungia horrida</i> | Genus name is unaccepted (synonymy), present in india |
| 227 | <i>Fungia klunzingeri</i> | <i>Danafungia horrida</i> | Complete name change, present in India |

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|-----|-----------------------------------|----------------------------------|---|
| 228 | <i>Fungia moluccensis</i> | <i>Pleuractis moluccensis</i> | Genus name is unaccepted (synonymy), present in india |
| 229 | <i>Fungia paumotensis</i> | <i>Pleuractis paumotensis</i> | Genus name is unaccepted (synonymy), present in india |
| 230 | <i>Fungia repanda</i> | <i>Lithophyllon repanda</i> | Genus name is unaccepted (synonymy), present in india |
| 231 | <i>Fungia scutaria</i> | <i>Lobactis scutaria</i> | Genus name is unaccepted (synonymy), present in india |
| 232 | <i>Fungia scruposa</i> | <i>Danafungia scruposa</i> | Genus name is unaccepted (synonymy), present in india |
| 233 | <i>Fungia scabra</i> | <i>Lithophyllon scabra</i> | Genus name is unaccepted (synonymy), present in india |
| 234 | <i>Fungia seychellensis</i> | <i>Pleuractis seychellensis</i> | Genus name is unaccepted (synonymy), present in india |
| 235 | <i>Fungia taiwanensis</i> | <i>Pleuractis taiwanensis</i> | Genus name is unaccepted (synonymy), present in india |
| 236 | <i>Halomitra pileus</i> | <i>Halomitra pileus</i> | Not present in India |
| 237 | <i>Herpolitha limax</i> | <i>Herpolitha limax</i> | Present in India |
| 238 | <i>Herpolitha weberi</i> | <i>Herpolitha limax</i> | Species name is unaccepted (synonymy), present in india |
| 239 | <i>Lithophyllon lobata</i> | <i>Lithophyllon undulatum</i> | Species name is unaccepted (synonymy), present in india |
| 240 | <i>Lithophyllon undulatum</i> | <i>Lithophyllon undulatum</i> | Present in India |
| 241 | <i>Podabacia crustacea</i> | <i>Podabacia crustacea</i> | Present in India |
| 242 | <i>Podabacia lanakensis</i> | <i>Podabacia lankaensis</i> | Present in India |
| 243 | <i>Polyphyllia talpina</i> | <i>Polyphyllia talpina</i> | Present in India |
| 244 | <i>Sandalolitha robusta</i> | <i>Sandalolitha robusta</i> | Present in India |
| 245 | <i>Hydnophora exesa</i> | <i>Hydnophora exesa</i> | Present in India |
| 246 | <i>Hydnophora grandis</i> | <i>Hydnophora grandis</i> | Present in India |
| 247 | <i>Hydnophora microconos</i> | <i>Hydnophora microconos</i> | Present in India |
| 248 | <i>Hydnophora pilosa</i> | <i>Hydnophora pilosa</i> | Present in India |
| 249 | <i>Hydnophora rigida</i> | <i>Hydnophora rigida</i> | Present in India |
| 250 | <i>Merulina ampliata</i> | <i>Merulina ampliata</i> | Present in India |
| 251 | <i>Merulina scabricula</i> | <i>Merulina scabricula</i> | Present in India |
| 252 | <i>Scapophyllia cylindrica</i> | <i>Merulina cylindrica</i> | Genus name is unaccepted (synonymy), present in india |
| 253 | <i>Acanthastrea echinata</i> | <i>Acanthastrea echinata</i> | Present in India |
| 254 | <i>Acanthastrea hemprichii</i> | <i>Acanthastrea hemprichii</i> | Present in India |
| 255 | <i>Acanthastrea hillae</i> | <i>Homophyllia bowerbanki</i> | Complete name change, present in India |
| 256 | <i>Acanthastrea ishigakiensis</i> | <i>Lobophyllia ishigakiensis</i> | Genus name is unaccepted (synonymy), present in india |
| 257 | <i>Cynarina lacrymalis</i> | <i>Cynarina lacrymalis</i> | Present in India |
| 258 | <i>Lobophyllia corymbosa</i> | <i>Lobophyllia corymbosa</i> | Present in India |

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|-----|-------------------------------------|-------------------------------------|---|
| 259 | <i>Lobophyllia hemprichii</i> | <i>Lobophyllia hemprichii</i> | Present in India |
| 260 | <i>Lobophyllia robusta</i> | <i>Lobophyllia robusta</i> | Not present in India |
| 261 | <i>Symphyllia agaricia</i> | <i>Lobophyllia agaricia</i> | Genus name is unaccepted (synonymy), present in india |
| 262 | <i>Symphyllia radians</i> | <i>Lobophyllia radians</i> | Genus name is unaccepted (synonymy), present in india |
| 263 | <i>Symphyllia recta</i> | <i>Lobophyllia recta</i> | Genus name is unaccepted (synonymy), present in india |
| 264 | <i>Symphyllia valenciennesii</i> | <i>Lobophyllia valenciennesii</i> | Genus name is unaccepted (synonymy), present in india |
| 265 | <i>Scolymia vitiensis</i> | <i>Lobophyllia vitiensis</i> | Genus name is unaccepted (synonymy), present in india |
| 266 | <i>Mycetophyllia danaana</i> | <i>Mycetophyllia danaana</i> | Not present in India |
| 267 | <i>Australomussa rowleyensis</i> | <i>Lobophyllia rowleyensis</i> | Not present in India |
| 268 | <i>Galaxea acrhelia</i> | <i>Galaxea acrhelia</i> | Present in India |
| 269 | <i>Galaxea astreata</i> | <i>Galaxea astreata</i> | Present in India |
| 270 | <i>Galaxea fascicularis</i> | <i>Galaxea fascicularis</i> | Present in India |
| 270 | <i>Echinophyllia aspera</i> | <i>Echinophyllia aspera</i> | Present in India |
| 272 | <i>Echinophyllia echinata</i> | <i>Oxypora echinata</i> | Genus name is unaccepted (synonymy), present in india |
| 273 | <i>Echinophyllia echinoporoides</i> | <i>Echinophyllia echinoporoides</i> | Present in India |
| 274 | <i>Mycedium elephantotus</i> | <i>Mycedium elephantotus</i> | Present in India |
| 275 | <i>Mycedium robokaki</i> | <i>Mycedium robokaki</i> | Not present in India |
| 276 | <i>Oxypora lacera</i> | <i>Oxypora lacera</i> | Present in India |
| 277 | <i>Oxypora crassispinosa</i> | <i>Oxypora crassispinosa</i> | Present in India |
| 278 | <i>Pectinia alvicornis</i> | <i>Pectinia alvicornis</i> | Present in India |
| 279 | <i>Pectinia lactuca</i> | <i>Pectinia lactuca</i> | Present in India |
| 280 | <i>Pectinia paeonia</i> | <i>Pectinia paeonia</i> | Present in India |
| 281 | <i>Pectinia teres</i> | <i>Pectinia teres</i> | Present in India |
| 282 | <i>Trachyphyllia geoffroyi</i> | <i>Trachyphyllia geoffroyi</i> | Present in India |
| 283 | <i>Alvopora catalai</i> | <i>Alveopora catalai</i> | Present in India |
| 284 | <i>Goniopora columna</i> | <i>Goniopora columna</i> | Present in India |
| 285 | <i>Goniopora lobata</i> | <i>Goniopora lobata</i> | Present in India |
| 286 | <i>Goniopora minor</i> | <i>Goniopora pedunculata</i> | Species name is unaccepted (synonymy), present in india |
| 287 | <i>Goniopora norfolkensis</i> | <i>Goniopora norfolkensis</i> | Not present in India |
| 288 | <i>Goniopora pandoraensis</i> | <i>Goniopora pandoraensis</i> | Present in India |
| 289 | <i>Goniopora planulata</i> | <i>Goniopora planulata</i> | Present in India |
| 290 | <i>Goniopora stokesi</i> | <i>Goniopora stokesi</i> | Present in India |
| 291 | <i>Goniopora tenuidens</i> | <i>Goniopora tenuidens</i> | Present in India |
| 292 | <i>Porites annae</i> | <i>Porites annae</i> | Present in India |
| 293 | <i>Porites arnaudi</i> | <i>Porites arnaudi</i> | Not present in India |

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| 294 | <i>Porites compressa</i> | <i>Porites compressa</i> | Present in India |
| 295 | <i>Porites cylindrica</i> | <i>Porites cylindrica</i> | Present in India |
| 296 | <i>Porites eridani</i> | <i>Porites eridani</i> | Present in India |
| 297 | <i>Porites evermanni</i> | <i>Porites evermanni</i> | Present in India |
| 298 | <i>Porites harrisoni</i> | <i>Porites harrisoni</i> | Not present in India |
| 299 | <i>Porites latistella</i> | <i>Porites latistellata</i> | Not present in India |
| 300 | <i>Porites lobata</i> | <i>Porites lobata</i> | Present in India |
| 301 | <i>Porites lutea</i> | <i>Porites lutea</i> | Present in India |
| 302 | <i>Porites monticulosa</i> | <i>Porites monticulosa</i> | Present in India |
| 303 | <i>Porites murrayensis</i> | <i>Porites murrayensis</i> | Present in India |
| 304 | <i>Porites myrmidoensis</i> | <i>Porites myrmidonensis</i> | Species spelling in incorrect, not present in India |
| 305 | <i>Porites nigrescens</i> | <i>Porites nigrescens</i> | Not present in India |
| 306 | <i>Porites rus</i> | <i>Porites rus</i> | Present in India |
| 307 | <i>Porites solida</i> | <i>Porites solida</i> | Present in India |
| 308 | <i>Porites vaughani</i> | <i>Porites vaughani</i> | Present in India |
| 309 | <i>Pocillopora ankeli</i> | <i>Pocillopora ankeli</i> | Genus spelling in incorrect, present in India |
| 310 | <i>Pocillopora damicornis</i> | <i>Pocillopora damicornis</i> | Present in India |
| 311 | <i>Pocillopora danae</i> | <i>Pocillopora verrucosa</i> | Present in India |
| 312 | <i>Pocillopora eydouxi</i> | <i>Pocillopora grandis</i> | Species name is unaccepted (synonymy), present in India |
| 313 | <i>Pocillopora kelleheri</i> | <i>Pocillopora kelleheri</i> | Not present in India |
| 314 | <i>Pocillopora ligulata</i> | <i>Pocillopora ligulata</i> | Present in India |
| 315 | <i>Pocillopora meandrina</i> | <i>Pocillopora meandrina</i> | Present in India |
| 316 | <i>Pocillopora verrucosa</i> | <i>Pocillopora verrucosa</i> | Repeated species, present in India |
| 317 | <i>Seriatopora aculeata</i> | <i>Seriatopora aculeata</i> | Not present in India |
| 318 | <i>Seriatopora hystrix</i> | <i>Seriatopora hystrix</i> | Present in India |
| 319 | <i>Seriatopora stellata</i> | <i>Seriatopora stellata</i> | Present in India |
| 320 | <i>Seriatopora pistillata</i> | <i>Stylophora pistillata</i> | No data available |
| 321 | <i>Coscinaraea columna</i> | <i>Psammocora columna</i> | Species name is unaccepted (synonymy), present in India |
| 322 | <i>Coscinaraea monile</i> | <i>Coscinaraea monile</i> | Present in India |
| 323 | <i>Psammocora contigua</i> | <i>Psammocora contigua</i> | Present in India |
| 324 | <i>Psammocora digitata</i> | <i>Psammocora digitata</i> | Present in India |
| 325 | <i>Psammocora explanulata</i> | <i>Cycloceris explanulata</i> | Genus name is unaccepted (synonymy), present in India |
| 326 | <i>Psammocora haimeana</i> | <i>Psammocora haimiana</i> | Species spelling in incorrect, present in India |
| 327 | <i>Psammocora profundacella</i> | <i>Psammocora profundacella</i> | Present in India |
| 328 | <i>Siderastrea savignyana</i> | <i>Siderastrea savignyana</i> | Present in India |

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|-----|---------------------------------|---------------------------------|---|
| 329 | <i>Tubipora musica</i> | <i>Tubipora musica</i> | Present in India |
| 330 | <i>Cirripathes anguina</i> | <i>Cirripathes anguina</i> | Present in India |
| 331 | <i>Cirripathes contorta</i> | | Could not find this species name anywhere |
| 332 | <i>Antipathes elegans</i> | <i>Antipathes elegans</i> | Present in India |
| 333 | <i>Sticopathes solorensis</i> | | Could not find this species name anywhere |
| 334 | <i>Cupressopathes gracilis</i> | <i>Cupressopathes gracilis</i> | Present in India |
| 335 | <i>Myriopathus antrocrada</i> | <i>Myriopathus antrocrada</i> | Present in India |
| 336 | <i>Antipathella subpinnata</i> | <i>Antipathella subpinnata</i> | Not present in India |
| 337 | <i>Plumapathes pennacea</i> | <i>Plumapathes pennacea</i> | Not present in India |
| 338 | <i>Dichotella gemmacea</i> | <i>Dichotella gemmacea</i> | Present in India |
| 339 | <i>Ellisella azilia</i> | <i>Ellisella azilia</i> | Not present in India |
| 340 | <i>Ellisella cercidia</i> | <i>Ellisella cercidia</i> | Not present in India |
| 341 | <i>Ellisella eustala</i> | <i>Ellisella eustala</i> | Not present in India |
| 342 | <i>Ellisella marisrubri</i> | <i>Ellisella marisrubri</i> | Not present in India |
| 343 | <i>Ellisella nuctenea</i> | <i>Ellisella nuctenea</i> | Not present in India |
| 344 | <i>Juncella delicata</i> | <i>Junceella delicata</i> | Genus spelling in incorrect, not present in India |
| 345 | <i>Juncella eunicelloides</i> | <i>Junceella eunicelloides</i> | Genus spelling in incorrect, not present in India |
| 346 | <i>Juncella juncea</i> | <i>Junceella juncea</i> | Genus spelling in incorrect, present in India |
| 347 | <i>Viminella crassa</i> | <i>Viminella crassa</i> | Not present in India |
| 348 | <i>Viminella junceelloides</i> | <i>Viminella junceelloides</i> | No data available |
| 349 | <i>Nicella flabellata</i> | <i>Nicella flabellata</i> | Present in India |
| 350 | <i>Nicella laxa</i> | <i>Nicella laxa</i> | Not present in India |
| 351 | <i>Verrucella cerasina</i> | <i>Verrucella cerasina</i> | Not present in India |
| 352 | <i>Verrucella corona</i> | <i>Verrucella corona</i> | Not present in India |
| 353 | <i>Verrucella diadema</i> | <i>Verrucella diadema</i> | Not present in India |
| 354 | <i>Verrucella gubalensis</i> | <i>Verrucella gubalensis</i> | Not present in India |
| 355 | <i>Verrucella klunzingeri</i> | <i>Verrucella klunzingeri</i> | Not present in India |
| 356 | <i>Isis hippuris</i> | <i>Isis hippuris</i> | Present in India |
| 357 | <i>Muricella paraplectana</i> | <i>Muricella paraplectana</i> | Not present in India |
| 358 | <i>Muricella ramosa</i> | <i>Muricella ramosa</i> | Species spelling in incorrect, present in India |
| 359 | <i>Acanthogorgia breviflora</i> | <i>Acanthogorgia breviflora</i> | Not present in India |
| 360 | <i>Acanthogorgia spinosa</i> | <i>Acanthogorgia spinosa</i> | Not present in India |
| 361 | <i>Anthogorgia ochracea</i> | <i>Anthogorgia ochracea</i> | Not present in India |
| 362 | <i>Rumphella aggregata</i> | <i>Rumphella aggregata</i> | Not present in India |
| 363 | <i>Rumphella torta</i> | <i>Rumphella torta</i> | No data available |

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| 364 | <i>Hicksonella princeps</i> | <i>Hicksonella princeps</i> | Not present in India |
| 365 | <i>Menella indica</i> | <i>Menella indica</i> | Present in India |
| 366 | <i>Menella kanisa</i> | <i>Menella kanisa</i> | Not present in India |
| 367 | <i>Menella kouare</i> | <i>Menella kouare</i> | Not present in India |
| 368 | <i>Menella woodin</i> | <i>Menella woodin</i> | Not present in India |
| 369 | <i>Bebryce sirene</i> | <i>Bebryce sirene</i> | Not present in India |
| 370 | <i>Bebryce studeri</i> | <i>Bebryce studeri</i> | Not present in India |
| 371 | <i>Echinogorgia flora</i> | <i>Menella flora</i> | Genus name is unaccepted (synonymy), present in India |
| 372 | <i>Echinogorgia toombo</i> | <i>Echinogorgia toombo</i> | Not present in India |
| 373 | <i>Echinogorgia indica</i> | | Could not find this species name anywhere |
| 374 | <i>Echinomuricea indomalaccensis</i> | <i>Echinomuricea indomalaccensis</i> | Present in India |
| 375 | <i>Euplexaura amerea</i> | <i>Euplexaura amerea</i> | Not present in India |
| 376 | <i>Euplexaura rhipidalis</i> | <i>Euplexaura rhipidalis</i> | Not present in India |
| 377 | <i>Trimuricea caledonica</i> | <i>Trimuricea caledonica</i> | Not present in India |
| 378 | <i>Villogorgia tenuis</i> | <i>Villogorgia tenuis</i> | Present in India |
| 379 | <i>Acabaria cinquemiglia</i> | <i>Melithaea cinquemiglia</i> | Genus name is unaccepted (synonymy), not present in India |
| 380 | <i>Acabaria ouvea</i> | <i>Melithaea ouvea</i> | Genus name is unaccepted (synonymy), not present in India |
| 381 | <i>Melithaea caledonica</i> | <i>Melithaea caledonica</i> | Not present in India |
| 382 | <i>Melithaea ochracea</i> | <i>Melithaea ochracea</i> | Not present in India |
| 383 | <i>Mopsella rubeola</i> | <i>Melithaea rubeola</i> | Genus name is unaccepted (synonymy), not present in India |
| 384 | <i>Wrightella braueri</i> | <i>Melithaea braueri</i> | Genus name is unaccepted (synonymy), no data |
| 385 | <i>Annella mollis</i> | <i>Annella mollis</i> | Present in India |
| 386 | <i>Annella reticulata</i> | <i>Annella reticulata</i> | Present in India |
| 387 | <i>Subergorgia rubra</i> | <i>Subergorgia rubra</i> | Not present in India |
| 388 | <i>Subergorgia suberosa</i> | <i>Subergorgia suberosa</i> | Present in India |

WoRMS Editorial Board (2022). World Register of Marine Species. Available from <https://www.marinespecies.org> at VLIZ. Accessed 13 January 2022. <https://doi.org/10.14284/170>

OBIS (2022). Ocean Biodiversity Information System. Intergovernmental Oceanographic Commission of UNESCO. www.obis.org. Accessed 13 January 2022.

HOLOTHURIANS (Schedule I – Part J)

1. The WPA amendment lists 32 species of sea cucumbers of which **four species are not present in India**.
2. Of the 28 species, **two species have incorrect scientific names and nine have typographic errors**.

Holothurians or Sea Cucumbers are one of the most threatened marine species groups due to extensive harvest for international trade. There are 173 species in India (Raghunathan & Venkataraman 2014). There is no rationale for including only 32 species on the schedule as in the WPA amendment 2021. While most sea cucumbers are difficult to identify on site or in a laboratory without extensive examination either morphologically or genetically, the selective list creates suitable opportunities for their harvest. Dry sea cucumbers are even more difficult to differentiate. We strongly recommend that a broad category of Sea Cucumbers or Holothurians (echinoderms of class Holothuroidea) without mentioning the species names should be listed under Schedule I – Part J.

The following Table summarises the details of Holothurians (sea cucumbers) listed under Schedule I, Part J of the WPA amendment bill 2021 with the corrections and comments based on World Register of Marine Species (WoRMS database) and Ocean Biodiversity Information System (OBIS database).

| SI No | Scientific name_WPA Amendment Bill 2021 | Correct name | Comments |
|-------|--|--|---|
| 1 | <i>Actinopygaechinites</i> | <i>Actinopyga echinites</i> | Present in India |
| 2 | <i>Actinopygalecanora</i> | <i>Actinopyga lecanora</i> | Present in India |
| 3 | <i>Actinopygamauritiana</i> | <i>Actinopyga mauritiana</i> | Present in India |
| 4 | <i>Actinopygamiliaris</i> | <i>Actinopyga miliaris</i> | Present in India |
| 5 | <i>Bohadschia argus</i> | <i>Bohadschia argus</i> | Present in India |
| 6 | <i>Bohadschiagraeffei</i> | <i>Pearsonothuria graeffei</i> | Not present in India |
| 7 | <i>Bohadschiamarmorata</i> | <i>Bohadschia marmorata</i> | Present in India |
| 8 | <i>Holothuria coluber</i> | <i>Holothuria (Acanthotrapeza) coluber</i> | Not present in India |
| 9 | <i>Holothuria (Acanthotrapez) pyxis</i> | <i>Holothuria (Acanthotrapeza) pyxis</i> | Present in India |
| 10 | <i>Holothuria (Halodeima) atra</i> | <i>Holothuria (Halodeima) atra</i> | Present in India |
| 11 | <i>Holothuria (Halodeima) edulis</i> | <i>Holothuria (Halodeima) edulis</i> | Present in India |
| 12 | <i>Holothuria (Mertensiothuria) fuscocinerea</i> | <i>Holothuria (Stauropora) fuscocinerea</i> | Present in India |
| 13 | <i>Holothuria (Mertensiothuria) leucospilota</i> | <i>Holothuria (Mertensiothuria) leucospilota</i> | Present in India |
| 14 | <i>Holothuria (Mertensiothuria) pervicax</i> | <i>Holothuria (Stauropora) pervicax</i> | Present in India |
| 15 | <i>Holothuria (Metriatyla) scabra</i> | <i>Holothuria (Metriatyla) scabra</i> | Present in India |
| 16 | <i>Holothuria (Microthele) nobilis</i> | <i>Holothuria (Microthele) nobilis</i> | Present in India |
| 17 | <i>Holothuria (Semperothuria) cinerascens</i> | <i>Holothuria (Semperothuria) cinerascens</i> | Present in India |
| 18 | <i>Holothuria (Thymiosyca) arenicola</i> | <i>Holothuria (Thymiosyca) arenicola</i> | Present in India |
| 19 | <i>Holothuria (Thymiosyca) hilla</i> | <i>Holothuria (Mertensiothuria) hilla</i> | Scientific name incorrect, present in India |
| 20 | <i>Holothuria (Thymiosyca) impatiens</i> | <i>Holothuria (Thymiosyca) impatiens</i> | Present in India |
| 21 | <i>Labidodemassemperianum</i> | <i>Labidodemas semperianum</i> | Not present in India |

| | | | |
|----|---|-----------------------------------|---|
| 22 | <i>Stichopus chloronotus</i> | <i>Stichopus chloronotus</i> | Present in India |
| 23 | <i>Stichopus hermanni</i> | <i>Stichopus hermanni</i> | Present in India |
| 24 | <i>Stichopus horrens</i> | <i>Stichopus horrens</i> | Present in India |
| 25 | <i>Stichopus vastus</i> | <i>Stichopus vastus</i> | Not present in India |
| 26 | <i>Thelenota ananas</i> | <i>Thelenota ananas</i> | Present in India |
| 27 | <i>Pseudocolochirus violaceus</i> | <i>Pseudocolochirus violaceus</i> | Present in India |
| 28 | <i>Stolus buccalis</i> | <i>Stolus buccalis</i> | Present in India |
| 29 | <i>Phyllophorus (Phyllophorella) parvepides</i> | <i>Phyllophorella spiculata</i> | Scientific name incorrect, present in India |
| 30 | <i>Euaptagodeffroyi</i> | <i>Euapta godeffroyi</i> | Present in India |
| 31 | <i>Synaptamaculata</i> | <i>Synapta maculata</i> | Present in India |
| 32 | <i>Acaudinamolpadioides</i> | <i>Acaudina molpadioides</i> | Present in India |

WoRMS Editorial Board (2022). World Register of Marine Species. Available from <https://www.marinespecies.org> at VLIZ. Accessed 13 January 2022. <https://doi.org/10.14284/170>

OBIS (2022). Ocean Biodiversity Information System. Intergovernmental Oceanographic Commission of UNESCO. www.obis.org. Accessed 13 January 2022.

Raghunathan, C. & K. Venkataraman (2014). *Status Survey of Holothurians (Sea Cucumber) in the Territorial waters of Andaman and Nicobar Islands: 1–96.* Published by the Director, Zoological Survey of India, Kolkata.

MOLLUSCA (Schedule I – Part I)

1. The WPA amendment lists 10 species of Mollusca and all are present in India.
2. **One of the species has an incorrect scientific name and four have typographic errors.**

The following Table summarises the details of Mollusca listed under Schedule I, Part I of the WPA amendment bill 2021 with the corrections and comments based on World Register of Marine Species (WoRMS database) and Ocean Biodiversity Information System (OBIS database).

| SI No | Scientific name_WPA Amendment Bill 2021 | Correct name | Comments |
|-------|---|----------------------------|---|
| 1 | <i>Cassis cornuta</i> | <i>Cassis cornuta</i> | Present in India |
| 2 | <i>Charoniatritonis</i> | <i>Charonia tritonis</i> | Present in India |
| 3 | <i>Conus milneedwardsi</i> | <i>Conus milneedwardsi</i> | Present in India |
| 4 | <i>Cypraecassisrufa</i> | <i>Cypraecassis rufa</i> | Present in India |
| 5 | <i>Hippopushippopus</i> | <i>Hippopus Hippopus</i> | Scientific name incorrect, present in India |
| 6 | <i>Nautilus pompilius</i> | <i>Nautilus pompilius</i> | Present in India |
| 7 | <i>Tridacna maxima</i> | <i>Tridacna maxima</i> | Present in India |
| 8 | <i>Tridacna squamosa</i> | <i>Tridacna squamosa</i> | Present in India |
| 9 | <i>Tudiclaspirillus</i> | <i>Tudicla spirillus</i> | Present in India |
| 10 | <i>Turbo marmoratus</i> | <i>Turbo marmoratus</i> | Present in India |

WoRMS Editorial Board (2022). World Register of Marine Species. Available from <https://www.marinespecies.org> at VLIZ. Accessed 13 January 2022. <https://doi.org/10.14284/170>

OBIS (2022). Ocean Biodiversity Information System. Intergovernmental Oceanographic Commission of UNESCO. www.obis.org. Accessed 13 January 2022.

MOLLUSCA (Schedule II – Part F)

1. The WPA amendment lists 14 species of Mollusca in Schedule II of which **two species are not present in India**.
2. Of the 12 species, **six species have incorrect scientific names and five species have typographic errors**.

The following Table summarises the details of Mollusca listed under Schedule II, Part F of the WPA amendment bill 2021 with the corrections and comments based on World Register of Marine Species (WoRMS database) and Ocean Biodiversity Information System (OBIS database).

| SI No | Scientific name_WPA Amendment Bill 2021 | Correct name | Comments |
|-------|---|---------------------------------|---|
| 1 | <i>Cypraealimacina</i> | <i>Staphylaea limacina</i> | Scientific name incorrect, not present in India |
| 2 | <i>Cypraeamappa</i> | <i>Leporicypraea mappa</i> | Scientific name incorrect, present in India |
| 3 | <i>Cypraeatalpa</i> | <i>Talparia talpa</i> | Scientific name incorrect, present in India |
| 4 | <i>Pleuroploca trapezium</i> | <i>Pleuroploca trapezium</i> | Present in India |
| 5 | <i>Harpulinaarasiaca</i> | <i>Harpulina arasiaca</i> | Not present in India |
| 6 | <i>Lambis chiragra arthritica</i> | <i>Harpago arthriticus</i> | Scientific name incorrect, present in India |
| 7 | <i>Lambis chiragra chiragra</i> | <i>Harpago chiragra</i> | Scientific name incorrect, present in India |
| 8 | <i>Lambiscrocatacrocata</i> | <i>Lambis crocata</i> | Present in India |
| 9 | <i>Lambismillepeda</i> | <i>Lambis millepeda</i> | Present in India |
| 10 | <i>Lambisscorpis</i> | <i>Lambis scorpis</i> | Present in India |
| 11 | <i>Lambistruncatatruncata</i> | <i>Lambis truncata truncata</i> | Present in India |
| 12 | <i>Placuna placenta</i> | <i>Placuna placenta</i> | Present in India |
| 13 | <i>Strombusplicatussibbaldi</i> | <i>Dolomena plicata</i> | Scientific name incorrect, present in India |
| 14 | <i>Trochus niloticus</i> | <i>Rochia nilotica</i> | Scientific name incorrect, present in India |

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OBIS (2022). Ocean Biodiversity Information System. Intergovernmental Oceanographic Commission of UNESCO. www.obis.org. Accessed 13 January 2022

SPONGES (Schedule II – Part G)

1. The WPA amendment lists 10 species of sponges in Schedule II of which **one species is not present in India**.
2. Of the remaining nine, **two species have scientific errors and two species have typographic errors**.

The following Table summarises the details of Sponges listed under Schedule II, Part G of the WPA amendment bill 2021 with the corrections and comments based on World Register of Marine Species (WoRMS database) and Ocean Biodiversity Information System (OBIS database).

| SI No | Scientific name_WPA Amendment Bill 2021 | Correct name | Comments |
|-------|---|--|---|
| 1 | <i>Clathrina coriacea</i> | <i>Clathrina coriacea</i> | Present in India |
| 2 | <i>Pericharaxheteroraphis</i> | <i>Pericharax heteroraphis</i> | Present in India |
| 3 | <i>Leucandradonani var tenuiradiata</i> | <i>Leucandra donnani var. tenuiradiata</i> | Present in India |
| 4 | <i>Leucandradwarkensis</i> | <i>Leucandra dwarkaensis</i> | Present in India |
| 5 | <i>Leucandrawasinensis</i> | <i>Leucandrilla wasinensis</i> | Scientific name incorrect, present in India |
| 6 | <i>Leuconia johnstoni</i> | <i>Leuconia johnstoni</i> | Not present in India |
| 7 | <i>Ute syconoides</i> | <i>Ute syconoides</i> | Present in India |
| 8 | <i>Grantessahastifera</i> | <i>Sycettusa hastifera</i> | Scientific name incorrect, present in India |
| 9 | <i>Heteropiaglomerosa</i> | <i>Heteropia glomerosa</i> | Present in India |
| 10 | <i>Sycon grantioides</i> | <i>Sycon grantioides</i> | Present in India |

WoRMS Editorial Board (2022). World Register of Marine Species. Available from <https://www.marinespecies.org> at VLIZ. Accessed 13 January 2022. <https://doi.org/10.14284/170>

OBIS (2022). Ocean Biodiversity Information System. Intergovernmental Oceanographic Commission of UNESCO. www.obis.org. Accessed 13 January 2022.

BUTTERFLY (Schedule I – Part F)

1. The WPA amendment lists 63 species of which **one species is not found in India**.
2. **18 species have incorrect scientific names.**
3. **35 species have typographical errors in scientific names and common names in which 25 species had errors in scientific names, 05 species had errors in common names, and 05 species had errors in both scientific and common names.**
4. There is no justification for inclusion of these species as opposed to not listing the remaining 1,000 plus species and subspecies that occur in India (Tiple 2011).

The following Table summarises the details of Butterfly listed under Schedule I, Part F of the WPA amendment bill 2021 with the corrections and comments based on Indian Foundation for Butterflies and A Synoptic Catalogue of the Butterflies of India.

| SI No | Common name_WPA Amendment Bill 2021 | Correct Common Name | Scientific name_WPA Amendment Bill 2021 | Correct scientific name | Comments |
|-------|--|-----------------------------------|--|------------------------------------|---|
| 1 | Kaiser-i-Hind | | <i>Teinopalpusimperialis</i> | <i>Teinopalpus imperialis</i> | Typographical error in scientific name |
| 2 | Varnished Apollo Butterfly | | <i>Parnassiusacco</i> | <i>Parnassius acco</i> | Typographical error in scientific name |
| 3 | Banded Apollo Butterfly | | <i>Parnassiusdelphius</i> | <i>Parnassius delphius</i> | Not found in India |
| 4 | Hannington Apollo Butterfly | | <i>Parnassiusshanningtoni</i> | <i>Parnassius hanningtoni</i> | Typographical error in scientific name |
| 5 | Imperial Apollo Butterfly | | <i>Parnassius imperator</i> | | |
| 6 | Ladakh Banded Apollo Butterfly | | <i>Parnassiusstoliczkanus</i> | <i>Parnassius stoliczkanus</i> | Typographical error in scientific name |
| 7 | Bhutan Glory Butterfly | | <i>Bhutanitislidderdalei</i> | <i>Bhutanitis lidderdalei</i> | Typographical error in scientific name |
| 8 | Common Clubtail Butterfly | Common Clubtail Butterfly | <i>Atrophaneura coon</i> | | Typographical error in common name |
| 9 | Black Windmill Butterfly | | <i>Atrophaneura crassipes</i> | | |
| 10 | Nevill's Windmill Butterfly | | <i>Atrophaneuranevilli</i> | <i>Byasa nevilli</i> | Genus name has changed from Atrophaneura to Byasa |
| 11 | Pemberton's Chinese Windmill Butterfly | | <i>Atrophaneuraplutioniusp embertoni</i> | <i>Byasa plutionius pembertoni</i> | Genus name has changed from Atrophaneura to Byasa |
| 12 | De Niceville's Windmill Butterfly | de Niceville's Windmill Butterfly | <i>Atrophaneurapolla</i> | <i>Atrophaneura polla</i> | Typographical error in common name and scientific name |
| 13 | Common Mime Butterfly | | <i>Chilasaclytiaclytia</i> | <i>Papilio clytia clytia</i> | Genus name has changed from Chilasa to Papilio |
| 14 | Yellow-crested Spangle Butterfly | | <i>Papilioelephenor</i> | <i>Papilio elephenor</i> | Typographical error in scientific name |
| 15 | Malabar Banded Swallowtail Butterfly | | <i>Papilioliomedon</i> | <i>Papilio liomedon</i> | Typographical error in scientific name |
| 16 | Shaw's Dwarf Butterfly | Sikkim Dwarf | <i>Baltiashawiisikkima</i> | <i>Baltia sikkima</i> | Common name has changed from Shaw's Dwarf to Sikkim Dwarf Typographical error in scientific name |
| 17 | Pale Jezebel Butterfly | | <i>Deliasanaca</i> | <i>Delias sanaca</i> | Typographical error in scientific name |
| 18 | Green Banded White Butterfly | | <i>Pieris krueperidevta</i> | <i>Pieris krueperi devta</i> | Typographical error in scientific name |

| | | | | | |
|----|--------------------------------|--------------------------------|--|---|---|
| 19 | Lemon Clouded Yellow Butterfly | | <i>Coliascocandicathrasibulus</i> | <i>Colias thrasibulus</i> | Genus name has changed to Colias. |
| 20 | Dwarf Clouded Yellow Butterfly | | <i>Coliasstoliczkanadubia</i> | <i>Colias dubia</i> | Genus name has changed to Colias. |
| 21 | Spotted Black Crow Butterfly | | <i>Euploeacramerinicevillei</i> | <i>Euploea crameri nicevillei</i> | Typographical error in scientific name |
| 22 | Andaman King Crow Butterfly | | <i>Euploearoepstorffi</i> | <i>Euploea midamus roepstorffi</i> | Change in scientific name, roepstorffi is a subspecies of Euploea midamus. |
| 23 | Scarce Blue Tiger Butterfly | | <i>Tellervogautamagautamoides</i> | <i>Tirumala gautama gautamoides</i> | Genus name has changed from Tellervo to Tirumala. |
| 24 | Scarce Catseye Butterfly | Scarce Catseye Butterfly | <i>Coelitesnothis</i> | <i>Coelites nothis</i> | Typographical error in common name and scientific name |
| 25 | Peal's Palmfly Butterfly | Peal's Palmfly Butterfly | <i>Elymniaspealii</i> | <i>Elymnias peali</i> | Typographical error in common name and scientific name |
| 26 | Pointed Palmfly Butterfly | Pointed Palmfly Butterfly | <i>Elymniaspenanga</i> | <i>Elymnias penaga</i> | Typographical error in common name and scientific name |
| 27 | Scarce Red Forester Butterfly | | <i>Lethe distans</i> | | |
| 28 | Scarce Lilacfork Butterfly | Scarce Lilacfork Butterfly | <i>Letha dura</i> | | Typographical error in common name |
| 29 | Bamboo Treebrown Butterfly | Bamboo Treebrown Butterfly | <i>Lethe europa</i> | | Typographical error in common name |
| 30 | Tytler's Treebrown Butterfly | Tytler's Treebrown Butterfly | <i>Lethe gemina</i> | | Typographical error in common name |
| 31 | Bhutan Treebrown Butterfly | | <i>Lethe margaritae</i> | | |
| 32 | Dismal Mystic Butterfly | | <i>Lethe ocellata</i> | | |
| 33 | Single Silverstripe Butterfly | | <i>Lethe ramadeva</i> | | |
| 34 | Pallid Forester Butterfly | | <i>Lethe satyavati</i> | | |
| 35 | Dark Wall Butterfly | | <i>Parargemaera</i> | <i>Lasiommata menava</i> | Scientific name has changed |
| 36 | Great Fivering Butterfly | Great Fivering Butterfly | <i>Ypthimadohertyi</i> | <i>Ypthima dohertyi</i> | Typographical error in common name and scientific name |
| 37 | Banded Duffer Butterfly | | <i>Discophora deo deo</i> | | |
| 38 | Freak Butterfly | | <i>Calinaga buddha</i> | | |
| 39 | Whitespot Fritillary Butterfly | Whitespot Fritillary Butterfly | <i>Clossianaerubescenshabe rhaueri</i> | <i>Boloria erubescens</i> | Typographical error in common name |
| 40 | Bhutan Sergeant Butterfly | | <i>Pantoporiajinajina</i> | <i>Athyma jina jina</i> | Genus name has changed from Pantoporia to Athyma. |
| 41 | Grey Commodore Butterfly | | <i>Limenitis austenia purpurascens</i> | <i>Bhagadatta austenia purpurascens</i> | Genus name has changed from Limenitis to Bhagadatta. |
| 42 | Grand Duke Butterfly | | <i>Euthaliaiva</i> | <i>Euthalia iva</i> | Typographical error in scientific name |
| 43 | Naga Duke Butterfly | | <i>Euthaliakhamacurvifascia</i> | <i>Euthalia curvifascia</i> | Species name is corrected, curvifascia is a species not a subspecies and khama is not a species hence removed |
| 44 | Tawny Emperor Butterfly | | <i>Chitoriaulupiulupi</i> | <i>Chitoria ulupi ulupi</i> | Typographical error in scientific name |
| 45 | Branded Yeoman Butterfly | | <i>Cirrochroafasciata</i> | <i>Algia fasciata</i> | Genus name has changed from Cirrochroa to Algia. |
| 46 | Scarce Siren Butterfly | | <i>Hestinainicevillei</i> | <i>Hestina nicevillei</i> | Typographical error in scientific name |
| 47 | Golden Emperor Butterfly | | <i>Dilipamorgiana</i> | <i>Dilipa morgiana</i> | Typographical error in scientific name |

| | | | | | |
|----|---------------------------------|--|--|--|---|
| 48 | Autumn Leaf Butterfly | | <i>Doleschallia bisaltideanda manensis</i> | <i>Doleschallia bisaltide andamanensis</i> | Typographical error in scientific name |
| 49 | Tytler's Emperor Butterfly | | <i>Eulaceuramanipurensis</i> | <i>Eulaceura manipurensis</i> | Typographical error in scientific name |
| 50 | Blue Duke Butterfly | | <i>Euthaliadurga splendens</i> | <i>Euthalia durga splendens</i> | Typographical error in scientific name |
| 51 | Blue Baron Butterfly | | <i>Euthaliatelchinia</i> | <i>Cynitia telchinia</i> | Genus name has changed from Euthalia to Cynitia. |
| 52 | White Emperor Butterfly | | <i>Helcyrahemina</i> | <i>Helcyra hemina</i> | Typographical error in scientific name |
| 53 | Empress Butterfly | | <i>Sasakiafunebria</i> | <i>Sasakia funebria</i> | Typographical error in scientific name |
| 54 | Eastern Courtier Butterfly | | <i>Sephisachandra</i> | <i>Sephis chandra</i> | Typographical error in scientific name |
| 55 | Scarce White Comodore Butterfly | | <i>Limenitis zulema</i> | <i>Sumalia zulema</i> | Genus name has changed from Limenitis to Sumalia. |
| 56 | Scarce Jester Butterfly | | <i>Symbrenthiasilana</i> | <i>Symbrenthia silana</i> | Typographical error in scientific name |
| 57 | Chestnut Rajah Butterfly | | <i>Charaxesdurnfordinicholii</i> | <i>Charaxes durnfordi nicholii</i> | Typographical error in scientific name |
| 58 | Malayan Nawab Butterfly | | <i>Polyura moori sandakanus</i> | <i>Polyura moori sandakana</i> | Subspecies name is incorrect |
| 59 | Blue Nawab Butterfly | | <i>Polyuraschreiberi</i> | <i>Polyura schreiber</i> | Species name is incorrect |
| 60 | Blue Begum Butterfly | | <i>Prothoefranck regalis</i> | <i>Prothoe franck regalis</i> | Typographical error in scientific name |
| 61 | Chinese Hairstreak Butterfly | | <i>Amblopalaavidiena</i> | <i>Amblopala avidiena</i> | Typographical error in scientific name |
| 62 | Cachar Mandarin Blue Butterfly | | <i>Charanacepheis</i> | <i>Charana cepheis</i> | Typographical error in scientific name |
| 63 | Blue Posy Butterfly | | <i>Myrinacyara</i> | <i>Drupadia scaeva cyara</i> | Genus name has changed from Myrina to Drupadia. cyara is a subspecies of Drupadia scaeva. |

Kunte, K., S. Sondhi & P. Roy (Chief Editors) (2022). *Butterflies of India*, v. 3.28. Indian Foundation for Butterflies. <https://www.ifoundbutterflies.org/> Accessed 13 January 2022.

Varshney, R.K. & P. Smetacek (eds.) (2015). A Synoptic Catalogue of the Butterflies of India. Butterfly Research Centre, Bhimtal and Indinov Publishing, New Delhi, ii + 261 pp., 8 pl. Accessed 13 January 2022.

Tiple, A.D. (2011). Butterflies of Vidarbharegion, Maharashtra State, central India. *Journal of Threatened Taxa* 3(1): 1469–1477.

BUTTERFLY (Schedule II – Part E)

1. The WPA amendment lists 57 species of which **10 species have errors in the scientific names.**
2. **One species is a vague entry and the details are not found.**
3. **Two species have typographical errors in scientific name.**
4. There is no justification for inclusion of these species as opposed to not listing the remaining 1,000 plus species and subspecies that occur in India (Tiple 2011).

The following Table summarises the details of Butterfly listed under Schedule II, Part E of the WPA amendment bill 2021 with the corrections and comments based on Indian Foundation for Butterflies and A Synoptic Catalogue of the Butterflies of India.

| SI No | Common name_WPA Amendment Bill 2021 | Correct Common Name | Scientific name_WPA Amendment Bill 2021 | Correct scientific name | Comments |
|-------|-------------------------------------|------------------------|---|--------------------------|--|
| 1 | White Dragontail Butterfly | | <i>Lamproptera curius</i> | | |
| 2 | Fivebar Swordtail Butterfly | | <i>Graphium antiphates</i> | | |
| 3 | Fourbar Swordtail Butterfly | | <i>Graphium agetes</i> | | |
| 4 | Common banded Peacock Butterfly | | <i>Papilio crino</i> | | |
| 5 | Paris Peacock Butterfly | | <i>Papilio paris</i> | | |
| 6 | Blue Mormon Butterfly | | <i>Papilio polymnestor</i> | | |
| 7 | Great Mormon Butterfly | | <i>Papilio memnon</i> | | |
| 8 | Andaman Mormon Butterfly | | <i>Papilio mayo</i> | | |
| 9 | Malabar Banded Peacock Butterfly | | <i>Papilio buddha</i> | | |
| 10 | Crimson Rose Butterfly | Crimson Rose Butterfly | <i>Atrophaneura hector</i> | <i>Pachliopta hector</i> | Genus name has changed from <i>Atrophaneura</i> to <i>Pachliopta</i> |
| 11 | Golden Birdwing Butterfly | | <i>Troidesaeacus</i> | <i>Troides aeacus</i> | Typographical error in scientific name |
| 12 | Southern Birdwing Butterfly | | <i>Troidesminos</i> | <i>Troides minos</i> | Typographical error in scientific name |
| 13 | Magpie Crow Butterfly | | <i>Euploea radamanthus</i> | | |
| 14 | Malabar Tree Nymph Butterfly | | <i>Idea malabarica</i> | | |
| 15 | Orange Oakleaf Butterfly | | <i>Kallima inachus</i> | | |
| 16 | Blue Oakleaf Butterfly | | <i>Kallima horsfieldi</i> | | |
| 17 | Danaid Eggfly Butterfly | | <i>Hypolimnas misippus</i> | | |
| 18 | Leopard Lacewing Butterfly | | <i>Cethosia cyane</i> | | |
| 19 | Tamil Lacewing Butterfly | | <i>Cethosia nietneri</i> | | |
| 20 | Queen of Spain Fritillary Butterfly | | <i>Issoria lathonia</i> | | |
| 21 | White Commodore Butterfly | | <i>Parasarpa dudu</i> | | |
| 22 | Clipper Butterfly | | <i>Parthenos sylvia</i> | | |
| 23 | Blue Duchess Butterfly | | <i>Euthalia dudu</i> | | |

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|----|------------------------------------|----------------------------|--|------------------------------------|--|
| 24 | Panther Butterfly | | <i>Neurosigma siva</i> | | |
| 25 | Archduke Butterfly | | <i>Lexias pardalis</i> | | |
| 26 | Common Map Butterfly | | <i>Cyrestis thyodamas</i> | | |
| 27 | Painted Courtesan Butterfly | | <i>Euripus consimilis</i> | | |
| 28 | Camberwell Beauty Butterfly | | <i>Nymphalis antiopa</i> | | |
| 29 | Ringed Argus Butterfly | | <i>Callerebiaannadaannada</i> | <i>Callerebia annada annada</i> | |
| 30 | Fuliginous Sailer Butterfly | | <i>Lasippa ebusa ebusa</i> | | Vague entry the details are not found |
| 31 | Yellowjack Sailer Butterfly | | <i>Lasippa viraja nar</i> | | |
| 32 | Variegated Sailer Butterfly | | <i>Neptis armandia</i> | | |
| 33 | Chinese Yellow Sailer Butterfly | | <i>Neptis kirbariensis</i> | <i>Neptis cydippe kirbariensis</i> | Change made as kirbariensis is a subspecies of Neptis cydippe |
| 34 | Pale Hockeystick Sailer Butterfly | | <i>Neptis manasa manasa</i> | | |
| 35 | Hockeystick Sailer Butterfly | | <i>Neptis nycteus</i> | | |
| 36 | Great Hockeystick Sailer Butterfly | | <i>Phaedyma aspasia</i> | | |
| 37 | Red-disc Bushbrown Butterfly | | <i>Mycalesis oculus</i> | | |
| 38 | Short-banded Sailer Butterfly | | <i>Phaedyma columella binghami</i> | | |
| 39 | Tytler's Lascar Butterfly | | <i>Pantoporia beiti paona</i> | | |
| 40 | Common Pierrot Butterfly | Andaman Common Pierrot | <i>Castalius rosimon alarbus</i> | | |
| 41 | Orchid Tit Butterfly | | <i>Chliaria othona</i> | | |
| 42 | Wonderfull Hairstreak Butterfly | | <i>Chrysozephyrus zulla</i> | <i>Thermozephyrus ataxus zulla</i> | Genus name has changed from Chrysozephyrus to Thermozephyrus. Zulla is a subspecies of Thermozephyrus ataxus. |
| 43 | Watson's Hairstreak Butterfly | Howarth's Green Hairstreak | <i>Chrysozephyrus disparatus pseudoletia</i> | | |
| 44 | Paona Hairstreak Butterfly | | <i>Chrysozephyrus paona</i> | <i>Shirozozephyrus paona</i> | Genus name has changed from Chrysozephyrus to Shirozozephyrus. |
| 45 | Cornelian Butterfly | | <i>Deudorix epijarbus amatius</i> | | |
| 46 | Peacock Hairstreak Butterfly | | <i>Evaspa pavo</i> | | |
| 47 | Hybrid Sapphire Butterfly | Golden Sapphire | <i>Heliophorus brahma</i> | <i>Heliophorus hybrida</i> | Common name and scientific name do not match. If common name is followed scientific name is Heliophorus hybrida, if scientific name is followed then common name is Golden Sapphire. |
| 48 | Violet Onyx Butterfly | | <i>Horaga albimacula</i> | | |
| 49 | Ferrar's Cerulean Butterfly | | <i>Jamides ferrari ferrari</i> | | |

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|----|---------------------------------|--|-------------------------------|-----------------------------------|--|
| 50 | Tytler's Dull Oakblue Butterfly | | <i>Arhopala arata</i> | <i>Arhopala ace arata</i> | Arata is a subspecies of Arhopala ace. |
| 51 | Rosy Oakblue Butterfly | | <i>Arhopala constanceae</i> | <i>Arhopala selta constanceae</i> | Constanceae is a subspecies of Arhopala selta. |
| 52 | Opal Oakblue Butterfly | | <i>Nilasera opalina</i> | <i>Arhopala opalina</i> | Genus name has changed from Nilasera to Arhopala. |
| 53 | Lister's Hairstreak Butterfly | | <i>Pamela dudgeoni</i> | | |
| 54 | Dark Blue Royal Butterfly | | <i>Pratapa icetas mishmia</i> | | |
| 55 | Elwes' Silverline Butterfly | | <i>Spindasis elwesi</i> | | |
| 56 | Khaki Silverline Butterfly | | <i>Aphnaeus rumini</i> | <i>Spindasis rukmini</i> | Genus name has changed from Aphnaeus to Spindasis. |
| 57 | Mackwood's Hairstreak Butterfly | | <i>Thecla mackwoodi</i> | <i>Strymon mackwoodi</i> | Genus name has changed from Thecla to Strymon. |

Kunte, K., S. Sondhi & P. Roy (Chief Editors) (2022). *Butterflies of India, v. 3.28*. Indian Foundation for Butterflies. <https://www.ifoundbutterflies.org/> Accessed 13 January 2022.

Varshney, R.K. & P. Smetacek (eds.) (2015). A Synoptic Catalogue of the Butterflies of India. Butterfly Research Centre, Bhimtal and Indinov Publishing, New Delhi, ii + 261 pp., 8 pl. Accessed 13 January 2022.

Tiple, A.D. (2011). Butterflies of Vidarbharegion, Maharashtra State, central India. *Journal of Threatened Taxa* 3(1): 1469–1477.

FISHES (Schedule I – Part E)

1. The WPA amendment lists 26 species of which only **03** are freshwater species with no rationale for their inclusion.
2. **15** species have typographic errors.
3. **Two** species have wrong scientific names.
4. **One** species of pipe fish is not found in Indian waters.
5. **One** extinct species from India is included.
6. There is no rationale for inclusion of pipe fishes as at least two endemic species that are in trade and not food fish are not included on the list – *Microphis cancalus* and *Ichthyocampus carce*.
7. Only one species of the very many highly threatened marine sharks that are harvested is listed.

The following Table summarises the details of Fishes listed under Schedule I, Part E of the WPA amendment bill 2021 with the corrections and comments based on IUCN Red List and Fishbase.

| SI No | Common name_WPA Amendment Bill 2021 | Scientific name_WPA Amendment Bill 2021 | Correct scientific name | Comments |
|-------|-------------------------------------|---|--------------------------------|--|
| 1 | Whale shark | <i>Rhincodon typus</i> | | |
| 2 | Knifetooth sawfish | <i>Anoxypristiscuspidata</i> | <i>Anoxypristis cuspidata</i> | |
| 3 | Long nosed shark/Pondicherry shark | <i>Carcharhinus hemiodon</i> | | |
| 4 | Gangetic shark | <i>Glyphis gangeticus</i> | | |
| 5 | Freshwater sawfish | <i>Pristispristis</i> | <i>Pristis pristis</i> | Not a freshwater species |
| 6 | Green sawfish | <i>Pristiszijsron</i> | <i>Pristis zijsron</i> | |
| 7 | Giant guitarfish | <i>Rhynchobatusdjiddensis</i> | <i>Rhynchobatus djiddensis</i> | |
| 8 | Porcupine ray | <i>Urogymnusasperrimus</i> | <i>Urogymnus asperrimus</i> | |
| 9 | Ganges Stingray | <i>Himantura fluviatilis</i> | | Does not occur in the Ganges. This is a marine species. |
| 10 | Denison barb | <i>Puntius denisonii</i> | <i>Sahyadria denisoni</i> | This is one of two species of <i>Sahyadria</i> which look similar. No reason why this is included while the other species <i>S. chalakudiensis</i> is not. This species is encouraged in trade as per the MPEDA list. This species is netted along with other food fishes and is consumed by the locals. Difficult to enforce unless it is specifically fished for trade purposes, which is impossible to prove. |
| 11 | Assamese Kingfish | <i>Semiplotussemiplotus</i> | <i>Semiplotus semiplotus</i> | This is a food fish of the local communities who are heavily dependent on it for their sustenance. Makes little sense to include this species as enforcement is impossible due to the fishing practices which do not distinguish between species. |

| | | | | |
|----|--------------------|-------------------------------------|-------------------------------------|--|
| 12 | Giant grouper | <i>Epinephelus lanceolatus</i> | <i>Epinephelus lanceolatus</i> | |
| 13 | Manipur osteobrama | <i>Osteobramabelangeris</i> | <i>Osteobrama belangeri</i> | This freshwater fish species is known to be extinct from India (Manipur). It is currently found only in Myanmar. |
| 14 | Pipe fish | <i>Choeroichthys sculptus</i> | <i>Choeroichthys sculptus</i> | |
| 15 | Pipe fish | <i>Corythoichthys amplexus</i> | | |
| 16 | Pipe fish | <i>Corythoichthys haematopterus</i> | <i>Corythoichthys haematopterus</i> | |
| 17 | Pipe fish | <i>Corythoichthys intestinalis</i> | | |
| 18 | Pipe fish | <i>Corythoichthys ocellatus</i> | | Not found in Indian waters |
| 19 | Pipe fish | <i>Corythoichthys schultzi</i> | <i>Corythoichthys schultzi</i> | |
| 20 | Pipe fish | <i>Doryhamphus dactyliophorus</i> | <i>Doryhamphus dactyliophorus</i> | |
| 21 | Pipe fish | <i>Halicampus macrorhynchus</i> | <i>Halicampus macrorhynchus</i> | |
| 22 | Pipe fish | <i>Halicampus mataafe</i> | <i>Halicampus mataafe</i> | |
| 23 | Pipe fish | <i>Syngnathoides biaculeatus</i> | <i>Syngnathoides biaculeatus</i> | |
| 24 | Sea horse | <i>Hippocampus histrix</i> | | |
| 25 | Sea horse | <i>Hippocampus kuda</i> | | |
| 26 | Sea horse | <i>Hippocampus trimaculatus</i> | | |

IUCN. 2021. The IUCN Red List of Threatened Species. Version 2021-3. <https://www.iucnredlist.org>. Accessed 13 January 2022.

Froese, R. and D. Pauly. Editors. 2021. FishBase. World Wide Web electronic publication. www.fishbase.org, version (08/2021). Accessed 13 January 2022.

General comments that have remained unchanged in the principle act and the current amendment that requires attention:

22. In section 39 of the principal Act, after sub-section (3), the following sub-sections shall be inserted, namely:—

"(4) Where any such Government property is a live animal, the State Government shall ensure that it is housed and cared for by a recognised zoo or rescue centre where it can not be released to its natural habitat.

Comment: If the animal is injured severely or terminally diseased, perhaps euthanasia should be a choice?

26. After section 42 of the principal Act, the following section shall be inserted, namely:—

"42A. (1) Any person having a certificate of ownership in respect of any captive animal, animal article, trophy or uncured trophy, meat or ivory imported into India or an article made from such ivory, and who is not desirous of keeping it in his control, custody or possession may, after giving notice of seven working days to the Chief Wild Life Warden, surrender the same to him and any such certificate of ownership shall stand cancelled from the date of such surrender.

Comment: Does not take into account

- Elephant hair being used as finger rings
- Coral used as jewelry
- Wildlife leather products being used as belts, shoes and bags
