

FAUNAL COMPOSITION AND BIOMASS :

4000 species are responsible of the fouling of hull including microorganisms (bacteria...), plants (diatoms, algae ...), animals (Cirripedia, polychatea...).

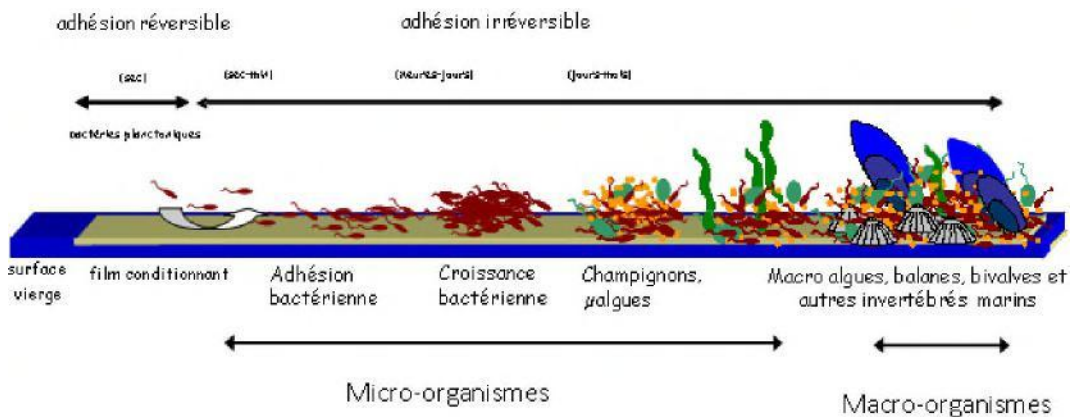
We only have the results of a study made by the National Institute of Oceanography of India who carried out the investigations on an oil producing platform in the Northern Arabian Sea about 200 KM from Bombay (India).

Panels made of mild steel and aluminium were used in as the test coupons. Panels were exposed at 4 depths. (2, 22, 42, and 62 meters).

Three observations :

- About a hundred species were identified in the biofouling. (see list below)
- The biomass is concentrated at the upper depths and only the 2 m depth held a mixed community consisting of algae, hydroids, oysters and ascidians.
- Among the two types of panels exposed aluminium is consistently found to be infected more than mild steel panels.

BIOFOULING FORMATION



Fouling Building Steps (HARAS 2005)

Acting on the biofilm will prevent micro-organisms and macro-organisms growth, whatever the species are.

LIST OF IDENTIFIED SPECIES

A - DIATOMS

- 1 *Amphore* sp.
- 2 *Cymbella* sp.
- 3 *Stauroneis* sp.
- 4 *Navicula* sp,
- 5 *Bellarochea* sp.
- 6 *Plucrosigma* sp.
- 7 *Amphiprora* sp.
- 8 *Achnanthes* sp.
- 9 *Orthonais* sp.
- 10 *Cocconeis* sp
- 11 *Fragllaria*
- 12 *Thalassiothrix* sp.
- 13 *Synedra* sp. "
- 14 *Raphoneis* sp.
- 15 *Plagiogramma* sp.
- 16 *Licmoptiora* so.
- 17 *Grammatophora* sp.
- 18 *Striatelta* sp.
- 19 *Nitzschia* sp.
- 20 *Hantzschia* sp.
- 21 *Homeocladia* sp.
- 22 "*Gllina*': dia 5».
- 23 *Rhizosoldnla* sp
- 24 *Chaetoceros* sp.
- 25 *Bacteriaslfum* sp,
- 26 *Steprai*, 'apixis sp.:
- 27 '*Mclosifa* sp. '.
- 28 *Hyalodiscus* sp ..
- 29 *Biduu!phia* sp.
- 30' *Triceratium* sp,
- 31 *COscinodisc~s* sp.

B - ALGAE

- 32 *Oscillatoria* S».
- 33 *Phormidium*
- 34 (NI green algae)
- 35' *Dictyota* sp,
- 36 *Ectocarpus* sp,
- 37 *Polysiphonia* sp. .
- 38 *Callithamnion byssoides*
- 39 *Giffordid sandriana*
- 40 *Centroceras* sp.
- 41 *Jania adhaerens*

C - PORIFERA

- 42 *Calcarea* sp,
- 43 *Callyspongia* sp.

D - CNIDARIA

- 44 *Obelia bidentata*
45. *dichotoma*"
- 46 *Cyrtta grucilis*
- 47 *Cuspidella humitis*"
- 48 *Sertularia inflatu*"
- 49 *S.turbinata*
- 50 *Dynamena crisiaides*
- 51 *Diphasia digitalis*
- 52 *Halopteris diaphana*
- 53 *Aglaophenia~pluma*
- 54 *Anemonia* sp,
- 55 *Dendrophyllidae* (Unidentified)

E - NEMATODA

(Unidentified species)

F - BRXOZOA

- 56 *Aetea* sp.
- 57 *Tubulipora*
- 58 *Flustra* sp..
- 59 *Idmonea* sp.
- 60' *Elecira* sp.:
- 61 *Parasmiana*
- 62 *Bugula* sp.
- 63 *B. neritina*
- 64 *Scrupocellaria*
- 65 *Membranipora* sp.

G - POLYCHAETA

- 66 *Chaetopterus* sp.
- 67 *Chloeia* sp ..
- 68 *Syllis* sp:
- 69 '*Serpulida* (Unidentified]
- 70' *Salmacina dysteri*
- 71 *Spirorbis* sp. .

H - CIRRIPEDIA

- 72 *Lepas* sp.
- 73 *Balanus tintinnabulum*
- 74 *B. amphitrite*
- 75 *B: amaryitls* .

I - AMPHIPODA

- 76 *Stenothoe gallensis*
- 77 *Moero pacifica*
78. *Elasmopus* sp.
- 79: *Podacerus* sp."
- 80 *P. hra.l'ili~llSis*
- 81 *Erichthonius .brasiliensis*
- 82 *Caprella equilibra*
- 83 *Paracaprella pusilla*

J - ISOPODA .

- 84 *Synidoteu* sp,
- 85 *Ciolano bovina*
- 86 *Cilicaea laurreillei*

K - PYCNOGONIDA

- 87 *Endels* sp.

L - BIVALVIA

- 88 *modiolus* sp.
- 89 *pinna atropurpuratus*
- 90 *P; tulipa*
- 91' *Pinctada fucata*
- 92 *maragaritifera*
- 93 *spondylus* sp,
- 94~ *Saccostrea* sp.

M-ECHINODERMATA,

- 95 *Ophiactis savignyii*,
- 96 *Eucidaris metularia*.

N - ASCIDIA

- 97 *Lissoclinum fragile* .:
- 98 *Ecteinascidia krishnani*
- 99 *Symplegma brackenhielmi*
- 100 *Didemnum* sp.
- 101 *Botryllus schlosseri*