Resting stages of HAB species in recent marine sediments from Peter the Great Bay, Sea of Japan (East Sea)

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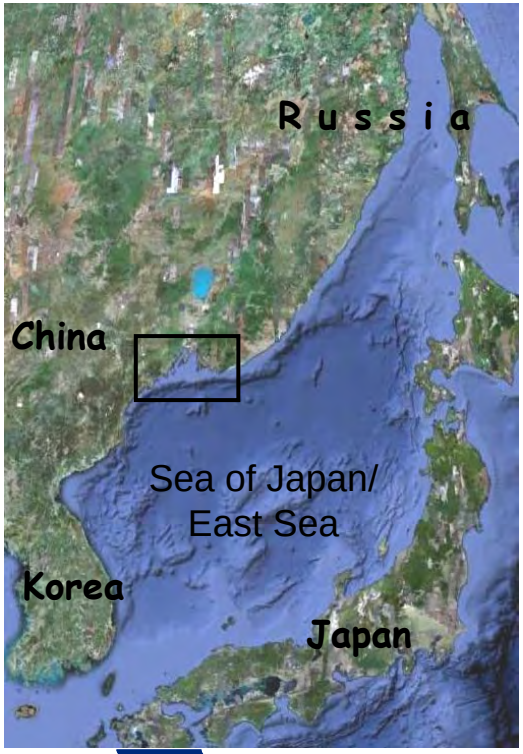
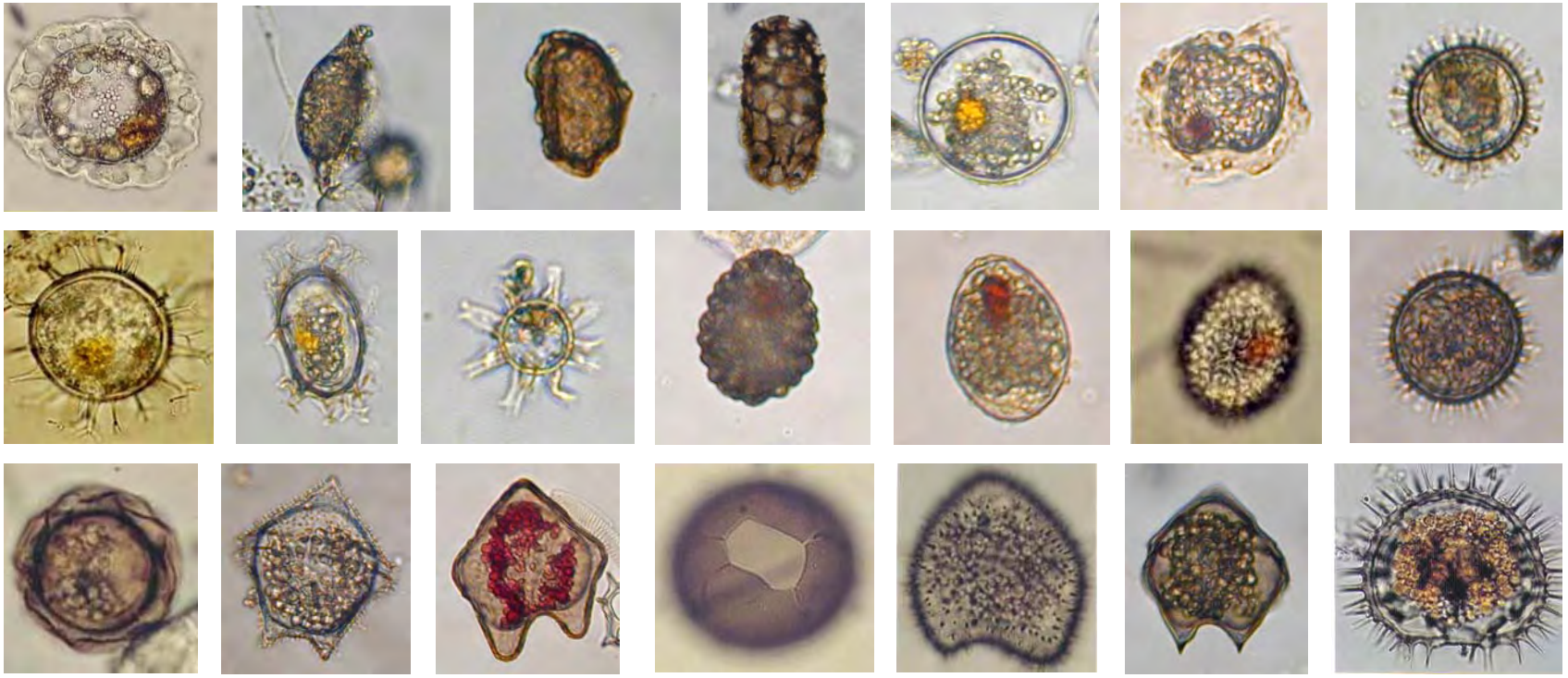
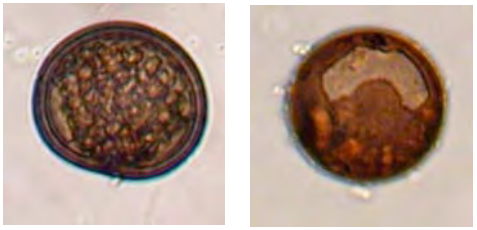


- 2000 - present time
- 31 stations



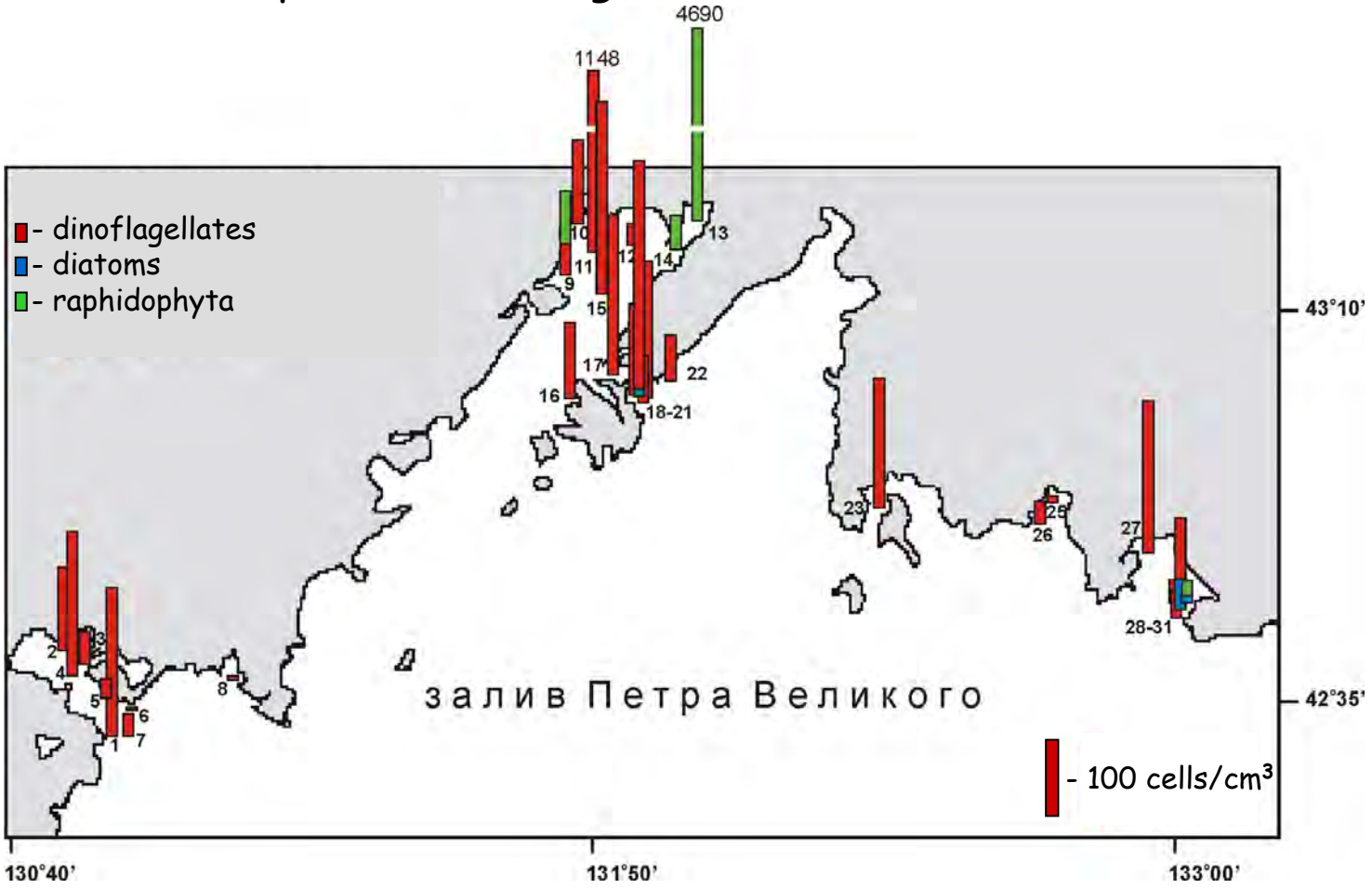
- A total of 61 types of resting stages:
- 47 dinoflagellates,
- 1 raphidophyte,
- 13 diatoms



- Among the microalgal resting stages the vegetative cells of 12 species were not previously recorded in the plankton of seas of Russia. We do not exclude the possibility that these resting stages may represent species introduced via warm surface waters and/or ship ballast waters.
- The cyst density of potential invasive species in our samples was not high, up to 200 cells/cm^3 of the sediment.

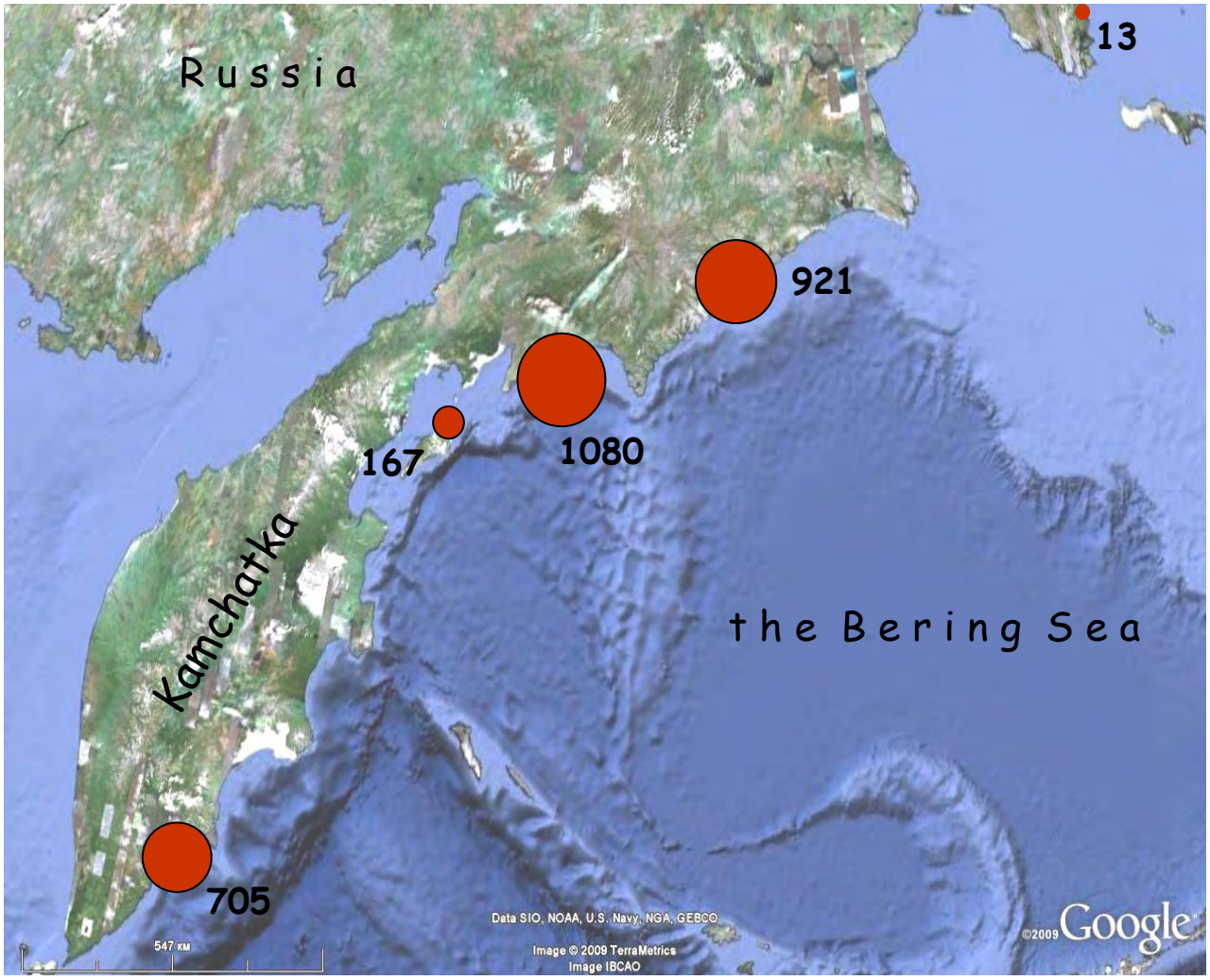
- *Cochlodinium* cf. *polykrikoides*
- *Diplopelta* cf. *parva*
- *Gonyaulax elongata*
- *Gonyaulax membranacea*
- *Gymnodinium* cf. *catenatum*
- *Gymnodinium impudicum*
- *Pentapharsodinium dalei*
- *Pentapharsodinium tyrhenicum*
- *Pheopolykrikos hartmannii*
- *Protoperidinium americanum*
- *Protoperidinium* cf. *avellanum*
- *Scrippsiella* cf. *precaria*

- Resting stages of 8 species were found: Alexandrium *tamarense*, *Alexandrium* cf. *tamnutum*, *Alexandrium* sp., *Cochlodinium* cf. *polykrikoides*, *Gymnodinium* cf. *catenatum*, *Protoceratium reticulatum*, *Pseudo-nitzshia* sp. and *Heterosigma* cf. *akashiwo*.



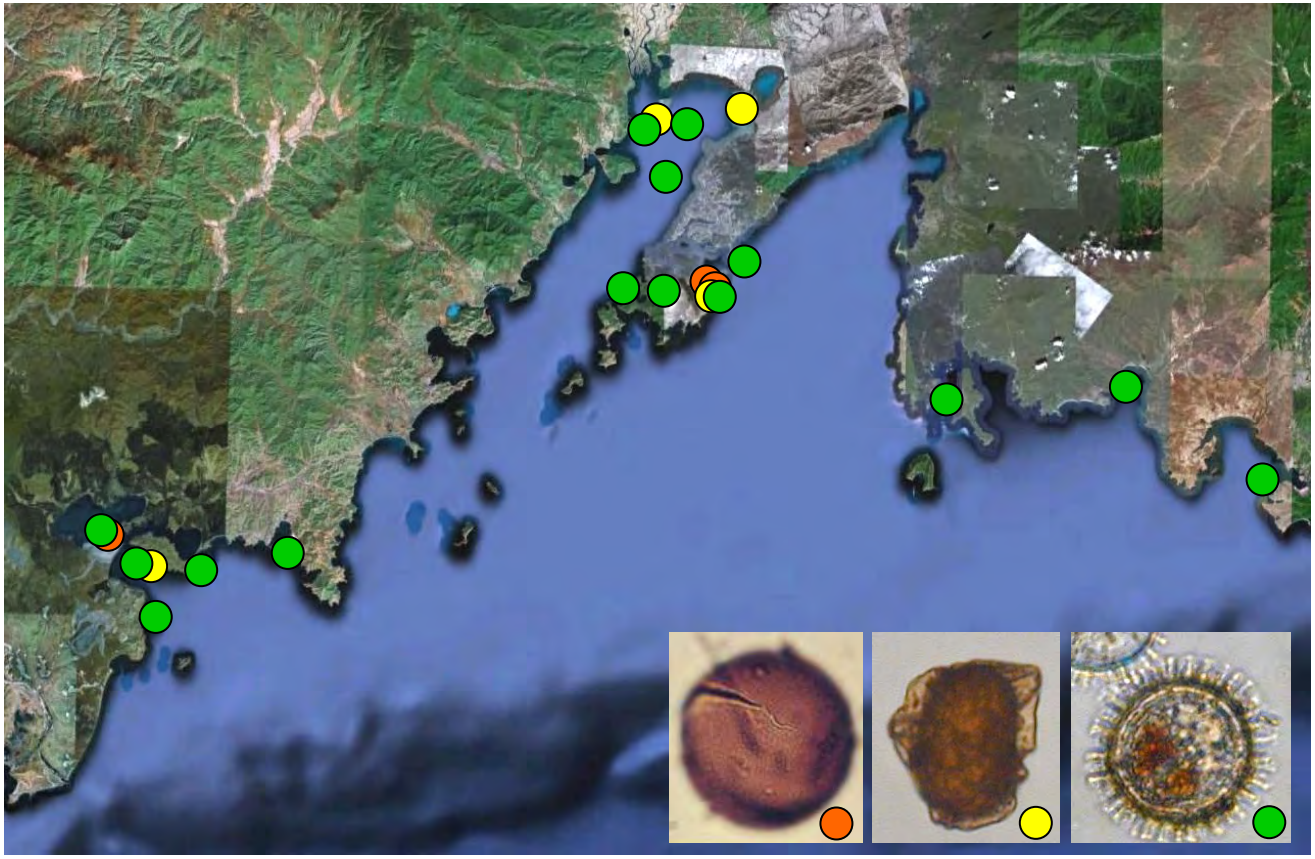
Density of resting stages of potentially toxic species and noxious bloom-forming species in bottom sediments of Peter the Great Bay

Density of *Alexandrium* spp. cysts in bottom sediments of Peter the Great Bay



- Density of *Alexandrium tamarense* cysts (cells/cm^3) in bottom sediments near the northeastern coast of Russia

- Density of *Gymnodinium* cf. *catenatum* cysts varied from 14 to 30 cells/cm^3.
- Density of *Cochlodinium* cf. *polykrikoides* cyst was 14-45 cells/cm^3.
- Density of *Protoceratium reticulatum* cyst reached 126 cells/cm^3.



- Resting cells of the diatom *Pseudo-nitzschia* sp. were found with densities 0-44 cells/cm^3

- Cyst density of the raphidophyte *Heterosigma* cf. *akashiwo* reached 4676 cells/cm^3


Thank you for attention
Far Eastern State Marine Biosphere Reserve