Thalassiosira antarctica (warm)
Note the processes that extend around the margin, the relatively large size and the large areolae, areolae tear-dropped shaped

Thalassiosira antarctica (cold)
Note the lack of marginal processes, smaller size and smaller areolae, areolae tear-dropped in shape

Thalassiosira gracilis var. nominate
Note the large hyaline area in the middle, areolae decrease in size away from the center, and areolae are fairly round

Thalassiosira gracilis var. expecta
Note that the hyaline area less prominent, variability in areolae size less obvious, and areolae fairly round
*Thalassiosira lentiginosa* – note prominent labiate process and lots of hyaline area

*Thalassiosira oliverana* – note “ring-like” margin

*Thalassiosira tumida* – note hexagonal areolae and “bowl-shape”
*Actinoecyclus actinochilus* – note lines of areolae

*Porosira glacialis* – wavy rivers of areolae

*Stellarima microtrias* – fasiculated areolae, hyaline area in center, “seeds”
**Fragilariopsis curta**
Note heteropolarity, paper-clip shaped, distinctive striae at ends

**Fragilariopsis cylindrus**
Note isopolarity, very narrow, and generally small

**Fragilariopsis ritscheri**
Note the “puffy” or inflated appearance

**Fragilariopsis kerguelensis**
Note triangular overall shape, zig-zag organization of areolae, and large areolae
*Fragilariopsis separanda* – single row of large areolae

*Fragilariopsis rhombica* – double row of small areolae

*Fragilariopsis obliquecostata* – long, diamond-shaped and oblique striae

*Fragilariopsis sublinearis* – finer detail and “dots”
Colonies of *Fragilariopsis* — difficult to identify to species — note girdle view and need to double your count

*Synedra* sp. — often very faint
*Trichotoxon reinboldii* – note distinctive end

*Dactyliosolen* sp. – girdle band

10 micron scale
Chaetoceros resting spores

Rhizosolenia sp.

Corethron sp.

10 micron scale
Eucampia antartica –
Things to notice include:
Pointy versus flat
Symmetric versus asymmetric
Cocconeis costata
Trachyneis aspera
Asteromphalus sp.
Chaeotoceros bulbosum – in the Phaeoceros group