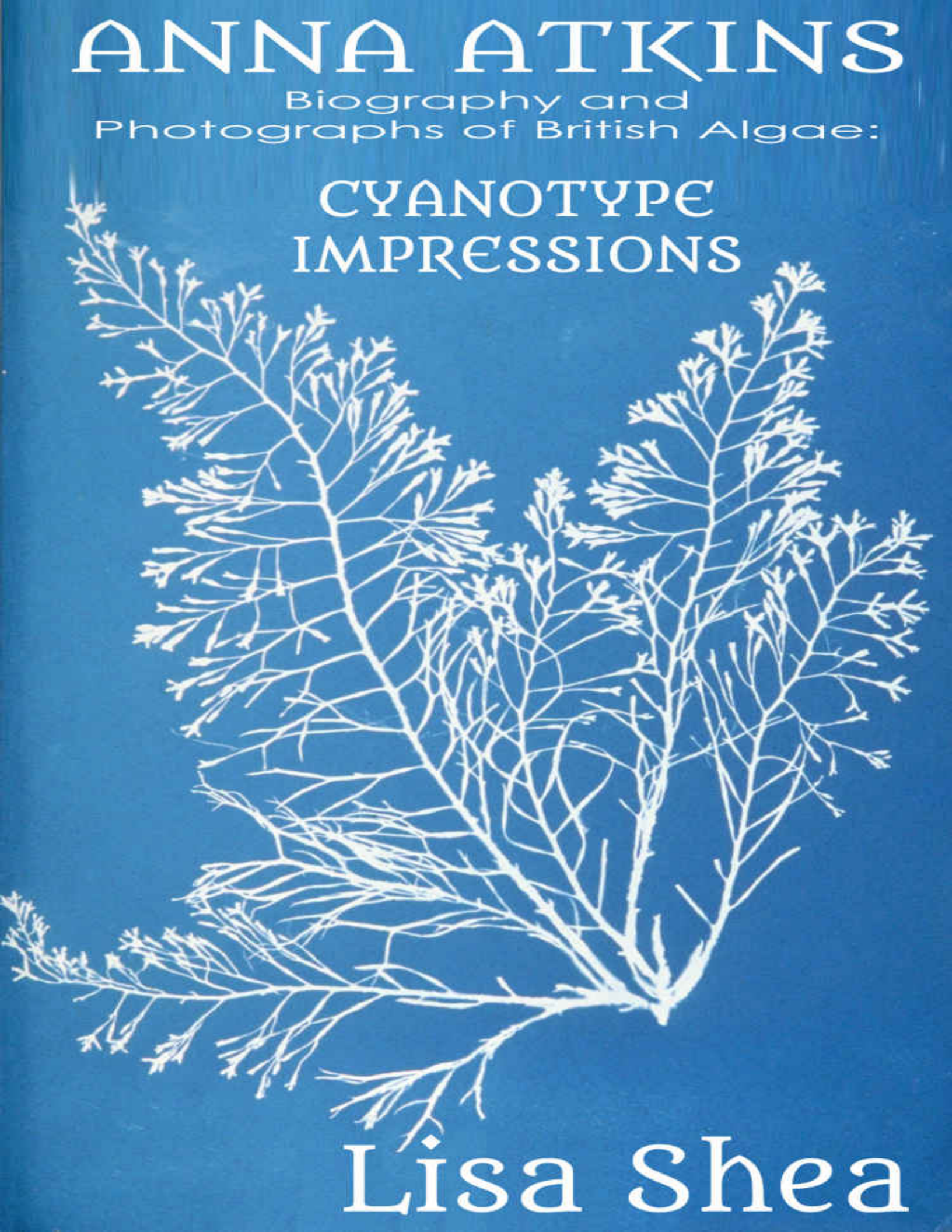
ANNA ATKINS

Biography and
Photographs of British Algae:

CYANOTYPE IMPRESSIONS



Lisa Shea

Anna Atkins
Biography
and
Photographs of British Algae:
Cyanotype Impressions

Lisa Shea

All proceeds from sales of this book support kids-in-arts programs.

INTRODUCTION

I adore cyanotypes. Maybe it's the fact that they can be created simply with the sun. Maybe it's the permanent one-of-a-kind nature of the art. Maybe part if it is the gorgeous Prussian blue color that is created. Whatever the reason, they speak to me.

Anna Atkins is hailed by many as the first woman photographer, primarily due to her work with cyanotypes. She forged a path in a time when most women couldn't vote or go to college.

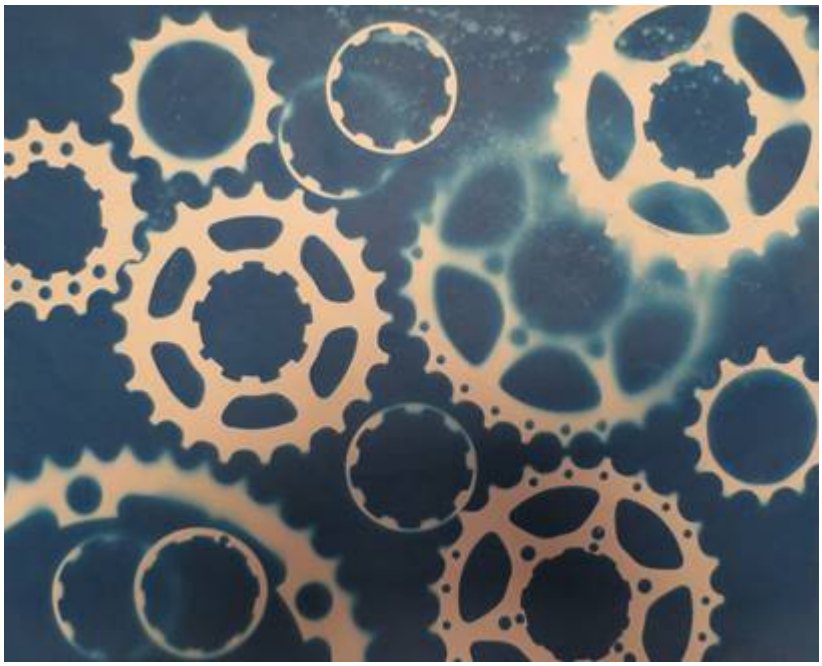
This book contains information on Anna Atkins, details on how cyanotypes are made, and then the twelve parts to her amazing book Photographs of British Algae. It doesn't matter if you're a fan of algae in particular – what is impressive is the amazing detail and range of shapes she captures in cyanotype. It's meditative to scroll slowly through them, absorbing the diversity that this world around us holds.

I'd love to hear feedback on the book!

All proceeds from sales of this book support kids-in-arts programs.

WHAT ARE CYANOTYPES?

Simply put, a cyanotype is an artwork created when the sun causes some parts of a surface (paper, fabric, etc.) to react which then differs from the part left in shadow. You end up with a shape made by that shadow. Here is a cyanotype I created with bicycle gears.



So how does this work?

You start by mixing up the cyanotype solution. There are two parts to this. One part is an 8.1% solution of potassium ferricyanide. The other part is a 20% solution of ferric ammonium citrate. You keep those two solutions separate until you're ready to start the cyanotype process. When you're ready, you mix equal parts of those two solutions together. You use that mixture like a paint to paint the paper, fabric, or other item you wish to work with. You need to dry the item in total darkness – otherwise it'll start reacting to light all on its own.

Once it's dry, you take it out into the sun and put items on top of the paper (fabric, etc.). It usually takes 10-20 minutes for the image to set, depending on how strong the sun is where you are. Then you rinse the object for a few minutes to get rid of any extra liquid.

Voila! Cyanotype!

You can do this with anything that will block the sun. So you can do it with gears, keys, plants, hands, feet, you name it. It has to be something that'll stay still for the 10-20 minutes so the shadow is etched.

Here's a t-shirt I did. I did this by painting my shirt unevenly with cyanotype liquid to give it a splotchy look. I printed a band logo onto transparency plastic with a regular printer. So that was a clear sheet of plastic with black ink where the logo was. I laid that transparency logo on top of the shirt along with a few bike gears and a sundial (the round circle) to keep the transparency from blowing away. Twenty minutes later and the shirt was done!

If you want more details about how to actually make your own cyanotypes, I have a separate book that goes into the gritty details of the process. This book is more focused on the amazing Anna Atkins!

BLUEPRINTS

Do you have any idea why architectural drawings are often done on blue paper and called blueprints? Since you're reading this book, you can probably guess that it has something to do with cyanotypes!

Back before cyanotypes were invented, architects had to laboriously copy over and re-draw plans to make a duplicate of them. This cost quite a lot of money and was prone to error.

Then along came cyanotypes!

Just as with the transparency logo to make a cyanotype duplicate of the logo, you could duplicate as many exact-copy blueprints as you wished simply by making the original on translucent paper.

So the architect would carefully make their original version on translucent paper. The ink would block the sunlight, while the blank parts of the paper would let the sun shine through.

Once that original was complete, the artist simply had to lay it on top of cyanotype after cyanotype. Each time they merely waited the 10-20 minutes for the sun to do its work and voila! A perfect duplicate of the drawing was now set!

This spread through architectural firms like wildfire and soon became the industry standard. It became so well ingrained that even now,

when there is no need for blue any more with our digital printing systems, many people still use the blue look.

ANNA ATKINS BIOGRAPHY

Anna Atkins was an amazing woman who was fortunate enough to have life circumstances support her growth.

She was born on March 17, 1799 – so long before women were generally encouraged (or allowed, in most places) to go to college or vote. Her mother died after childbirth so she was raised by her father, John Children, who was a talented chemist and zoologist. Since it was just the two of them, John spent a lot of time teaching his daughter about science, and she adored it.

When she was 26 she finally settled down and married John Pelly Atkins. She was waiting for a man who would support her in her adoration of science, and with John she had that partner. Both her husband and father were good friends with William Henry Fox Talbot, of photography fame. In 1835 Talbot made some of his very first photographs. By 1841 Atkins was working with one of the very first cameras in the world.

In 1842 another friend, Sir John Herschel, came up with the cyanotype process. Where film needed cameras and developing, a cyanotype only needed the chemicals and a piece of paper. Yes, it was more about shadows than a detailed representation of an object, but for Atkins, this was fine. She knew this was just what she needed to be able to "illustrate" a book on algae. And by doing so, she became the very first woman to create a photograph – as well as the creator of the first book ever to contain photographic images.

Let's take a step back to remember how books were made before the digital age. Before the printing press, people would have to hand copy every single page with a pen. They would have a copy of the book on a table, a piece of paper, and they'd literally have to rewrite the entire book page by page. If you've seen movies set in medieval ages you might have seen scenes of monks laboriously hand copying important documents.

Then came Gutenburg and his printing press. This was in 1439. What he did was make metal letters that could be arranged in wooden trays. Again, this was very tedious work. A person would have to lay out every page of the book, letter by letter, in those trays. This image is of just the letters, not a book, but it's laid out in the same way. Every single page had to be meticulously hand created by someone filling in rows with metal letters.

And note that this was all done backwards! It had to be laid out backwards so that when it pressed onto the paper the image would then be right side up. Talk about confusing!

So a downside of this was that the only way to "illustrate" the book was to have a wood block print. That is, someone would carve an image into a wooden block and then that, too, could be pressed down into the piece of paper.

So for hundreds of years, that is how books were made. Metal letters arranged in order would make the words. A carving of a picture in wood would make the images. Yes, a talented artist could create quite a lovely wood carving – but it still wasn't "the real image."

So into this world came Anna Atkins. She had grown up tutored by her scientist father. She had married a man who supported her interests. She was lucky enough to be friends with people at the forefront of the new photography technologies. For whatever reason, she never had children, so she had more free time than many women of her era.

And she had a project.

She put her dried seaweed in glass plates so it'd be easy to move around and do multiple images of without changing the arrangement of the fronds. And then she lay them on cyanotype paper! Voila! She could now use the results as images in her book.

For the first time ever a person could buy a book that had actual from-the-object images to peruse. It wasn't just an illustration. It was a real representation of the object itself, etched by the sun.

Anna was celebrated in her time for her work. She was granted the honor of being elected as a member of the Botanical Society of London. Note that, being female, she wasn't actually allowed to give talks there or to hold office. Still, one step at a time.

Now she is immortalized in history for her efforts.

She passed away in 1871 at age 72.

ABOUT THE ALGAE BOOK

As you might imagine, there wasn't an enormous audience clamoring to get their hands on a book about algae. It wasn't as if Anna had written *Pride & Prejudice*. So she only did a limited run of her printings. She created small 13-image booklets which each covered a small subset of her algae library. Over time she got better samples so she'd re-release booklets or individual plates and deliver them to book owners.

Some book owners would replace the booklets in their library. Others wouldn't, for whatever reason. Over the years books got lost or destroyed. In our current time, only seventeen copies of the books are accounted for – and they're all in different configurations. So it's not like Pride & Prejudice where a book came out in one format and pretty much is always found like that.

The books, having been printed back in the mid-1800s, are long out of copyright. The images in here hail from the copy held at the New York Public Library. The images are from Booklets I through XII. They got the book directly from Herschel's descendants.

Booklets I through XII were published between 1843 and 1850. So this was not a quick process, even though they held only 13 or so images each. Note that they were missing booklet III.

Even though Anna had access to typesetting, she chose not to use it. Instead, she did even the text with cyanotype. All she had to do was hand-write notes on thin see-through paper and then lay that paper on top of a cyanotype paper. Voila! The sun would shine through the thin parts and the darker ink would leave its shadow.

MY VERSIONS OF THE IMAGES

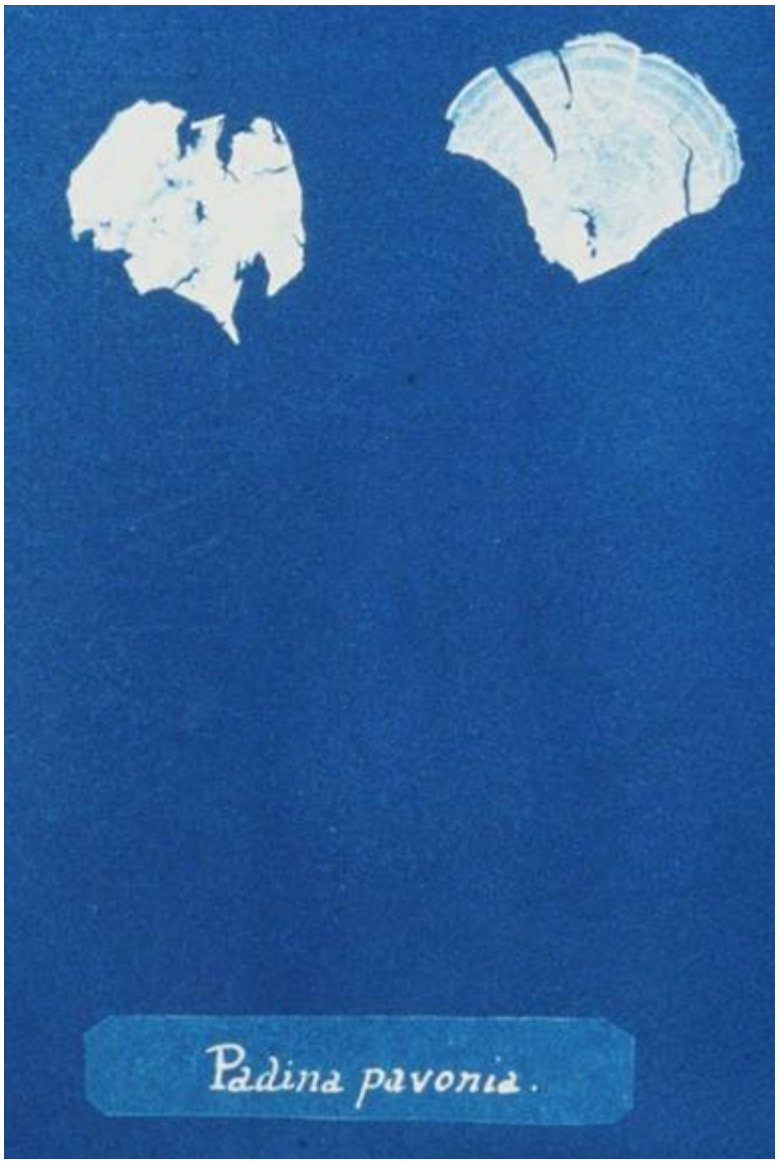
These sheets of cyanotypes used for Anna's books were standard sizes. So the paper would be a large rectangle no matter how big or small the algae was. If it was big algae, it would take up the entire page. If it was tiny algae, it would be a tiny speck on a big blue page.

This made sense when she was making her book – but in ebook form it doesn't make sense to show a tiny image surrounded by lots of blue. So I cropped down to the image itself so you could more clearly see the image.

Here's an example.

Here's an original page from Anna's book. See how the algae is just a small portion of the entire page? If you looked at that on a tablet or smartphone you would barely be able to see the actual image because of all that "wasted" space that is just blue.

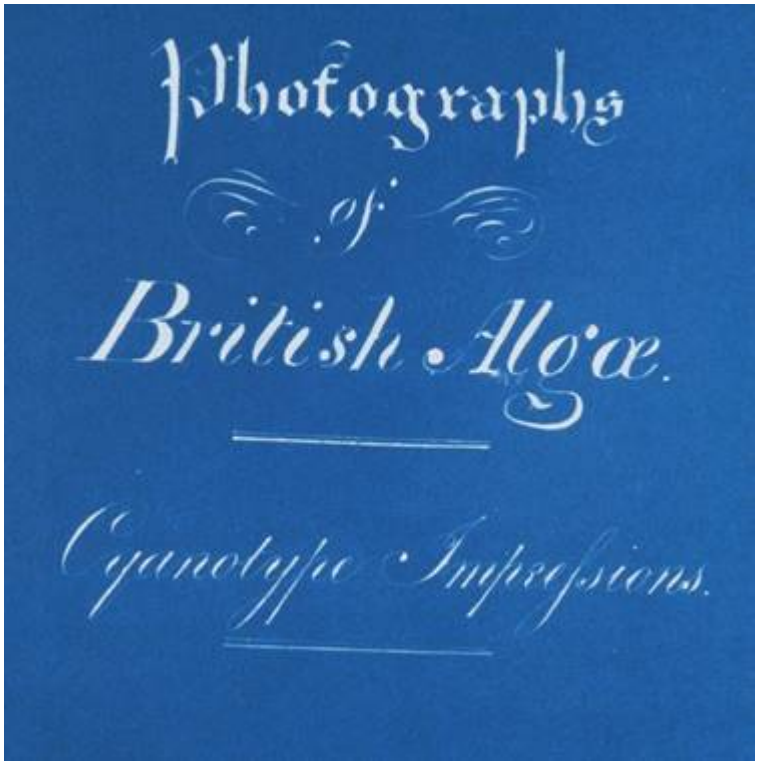
So what I did was to crop down to just the algae and its title. You still get all the meaningful information – but it should scale much better on your reading device.

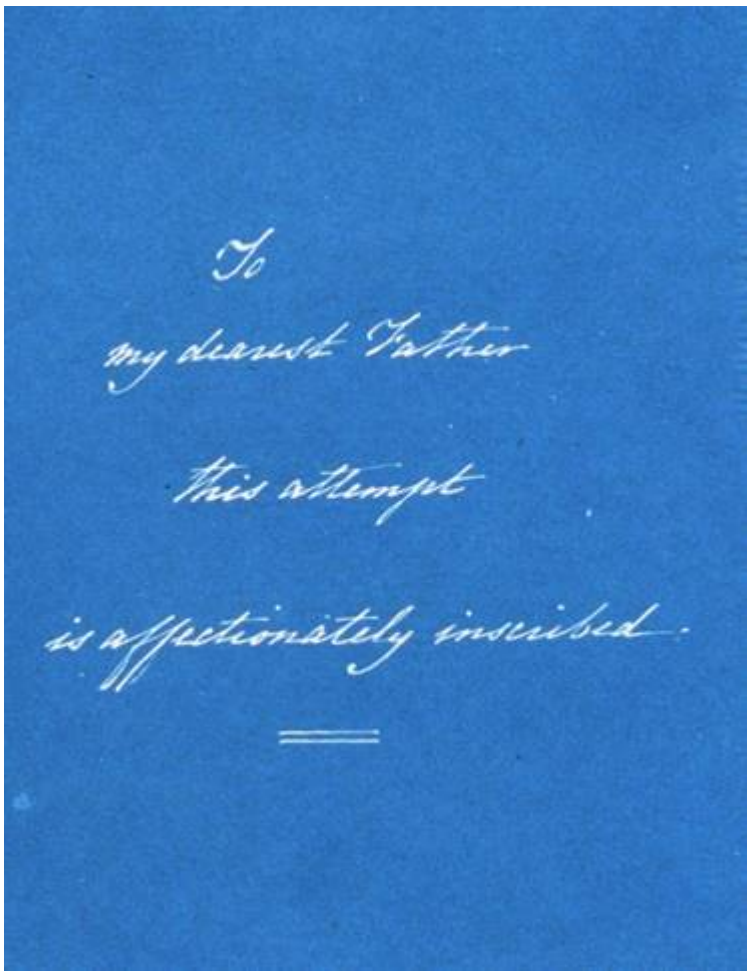


Let me know if you have any questions about this!

And now, on to the cyanotypes!

PART I




To
my dearest Father
this attempt
is affectionately inscribed.

This says:

To my dearest Father this attempt is affectionately inscribed.

The difficulty of making accurate drawings of objects so minute as many of the Algæ and Confervæ, have induced me to avail myself of Sir John Herschel's beautiful process of Cyanotype, to obtain impressions of the plants themselves, which I have much pleasure in offering to my botanical friends.

I hope that in general the impressions will be found sharp and well defined, but in some instances (such as the Base / the thickness of the specimens renders it impossible to press the glass used in taking Photographs sufficiently close to them to ensure a perfect representation of every part. Being however unwilling to omit any species to which I had access, I have preferred giving such impressions as I could obtain of these minute objects, to their entire omission. — I take this opportunity of returning my thanks to the friends who have allowed me to use their collections of Algæ on this occasion.

The names refer to Harvey's "Manual of British Algæ". I have taken the Tribes and Species in their proper order when I was able to do so, but in many cases I have been compelled to make long gaps, from the want of the plants that should have been next inserted, and in this first number I have intentionally departed from the systematic arrangement, that I might give specimens of very various characters as a sample.

A. A.

This begins (to the best of my ability to read it):

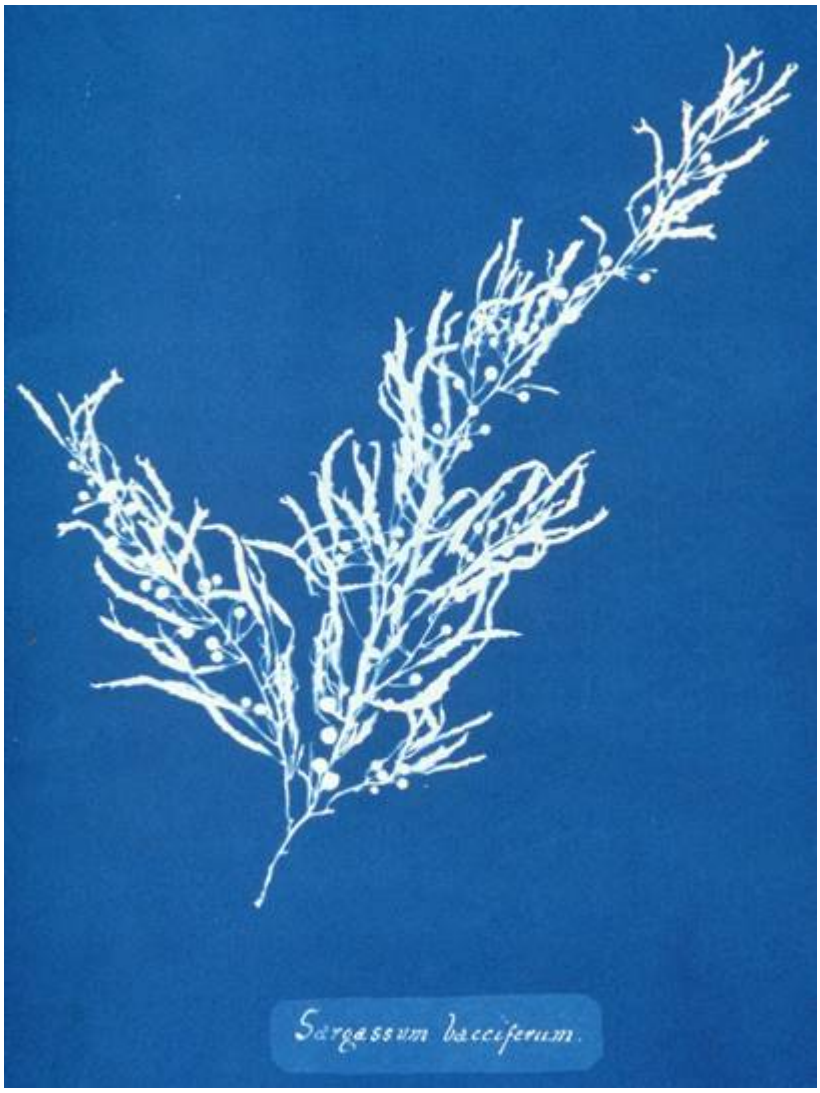
(note that, in this time period, a double-s would be represented with a script lowercase f).

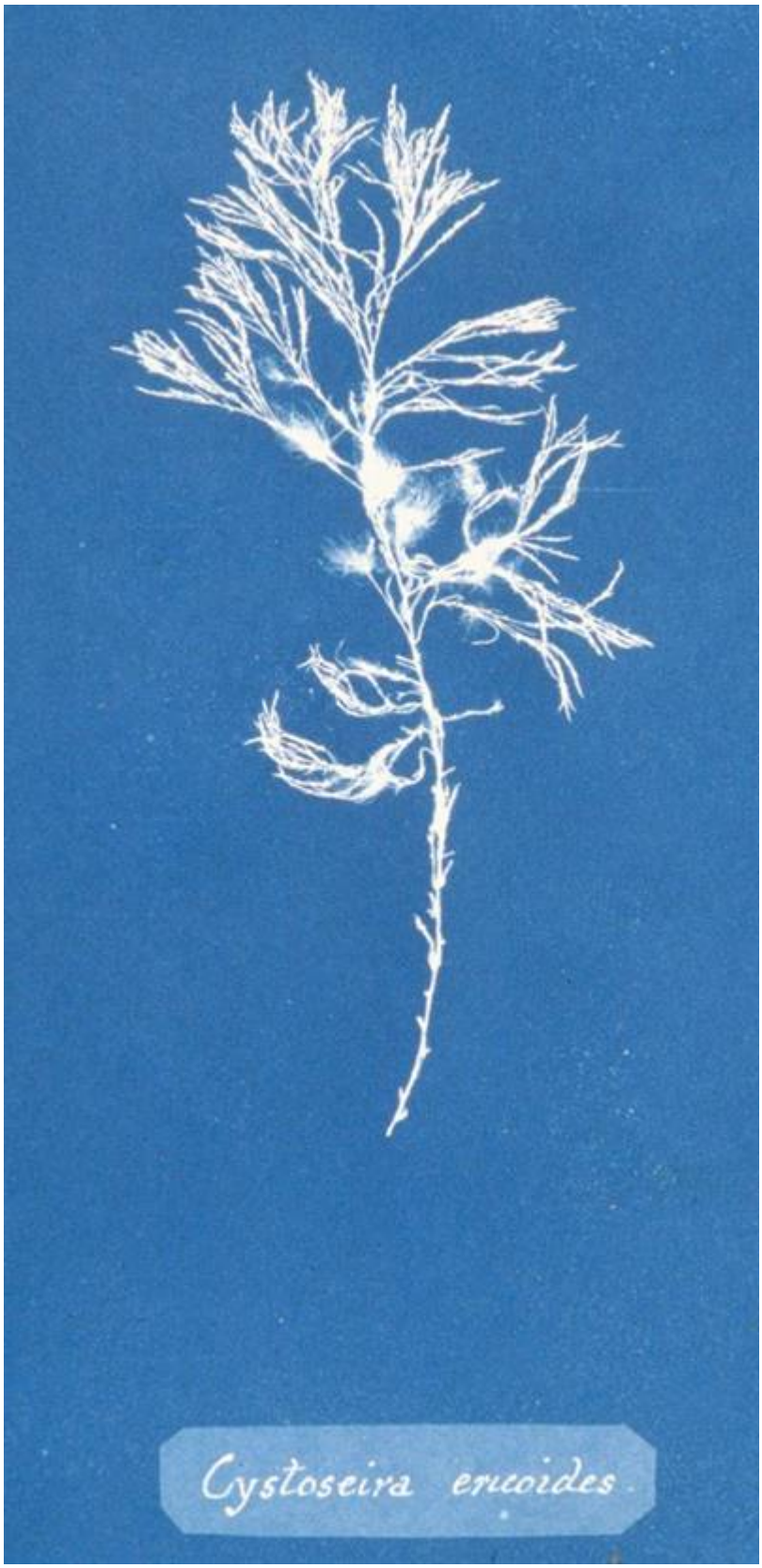
The difficulty of making accurate drawings of objects as minute as many of the Algae and Confera, has induced me to avail myself of Sir John Herschel's beautiful process of cyanotype, to obtain impressions of the plants themselves, which I have much pleasure in offering to my botanical friends.

I hope that in general the impressions will be found sharp and well defined, but in some instances(such as the Furi) the thickness of the specimens renders it impossible to press the glass used in taking Photographs sufficiently close to them to ensure a perfect representation of every part. Being however unwilling to omit any species to which I had access, I have preferred giving such imperfections as I could obtain of these thick objects, to their entire mission. I take this opportunity of returning my thanks to the friends who have allowed one to use their collections of Algae on this occasion.

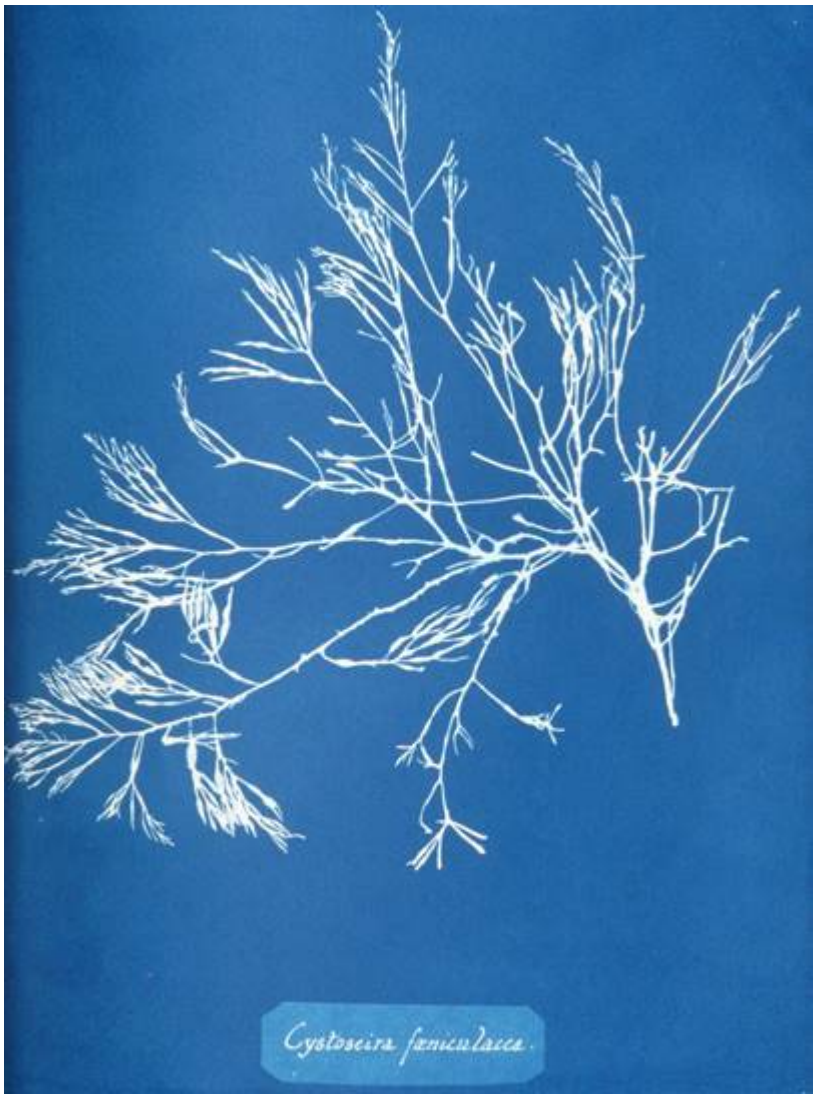
The names refer to Harvey's "Manual of British Algae." I have taken the Tribes and Species in their proper order when I was able to do so, but in many cases I have been compelled to make long gaps, from the want of the plants that should have been neat inserted, and in this first number I have intentionally separated from the systematic arrangement that I might give specimens of every various characters as a sample.

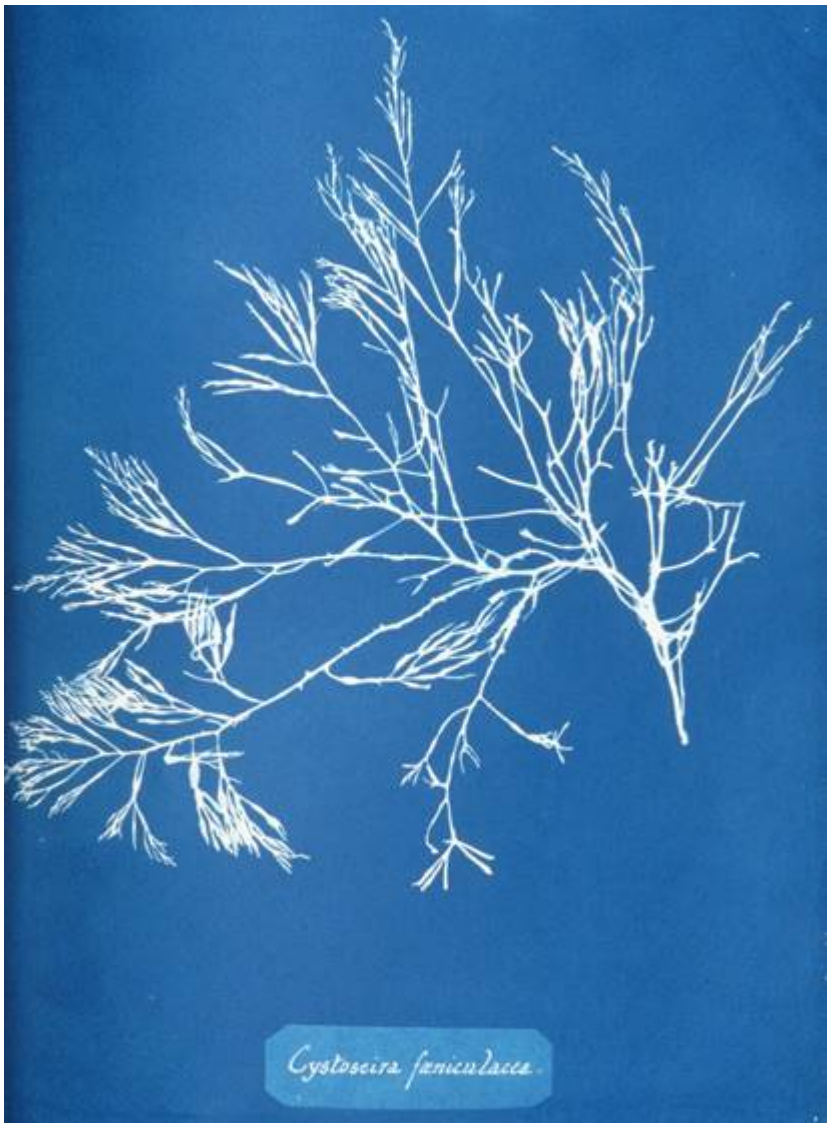
A.A.

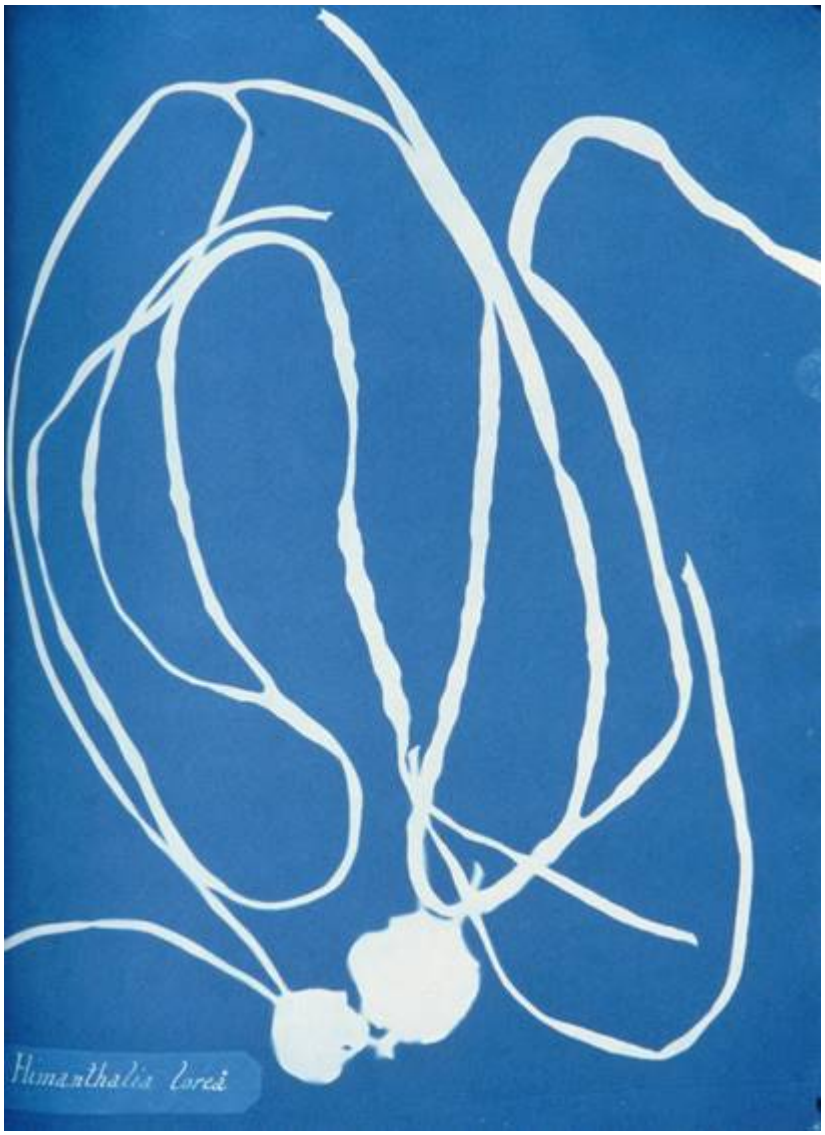

Sargassum bacciferum.


Cystoseira ericoides.


Cystoseira granulata.


Cystoseira fœniculacea.


Cystoseira fœniculacea

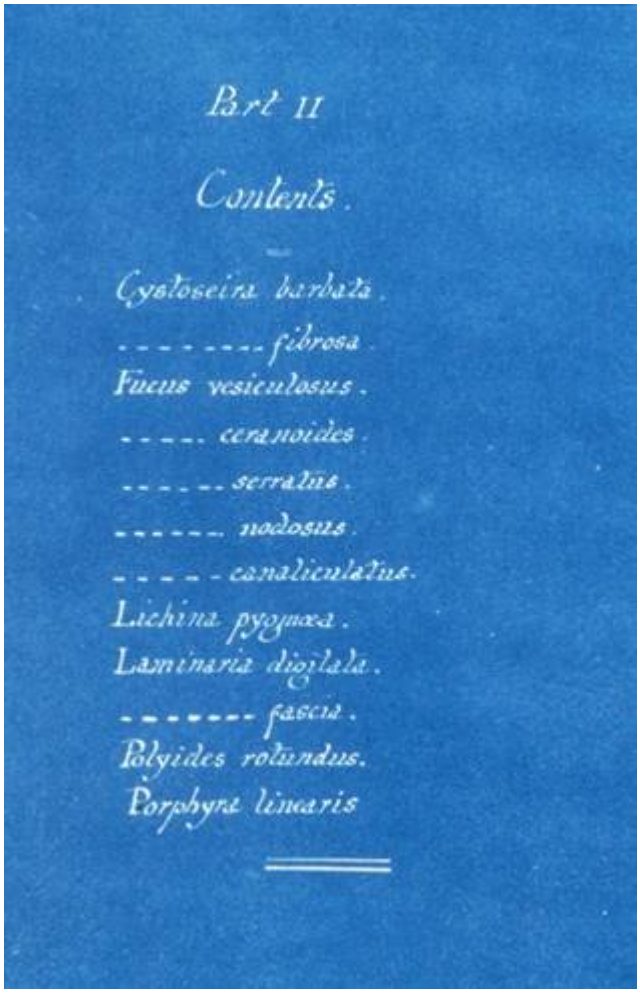

Hæmanthalia Loreä


Laminaria saccharina.


Polysiphonia violacea.


Bangia fusco-purpurea.

PART II



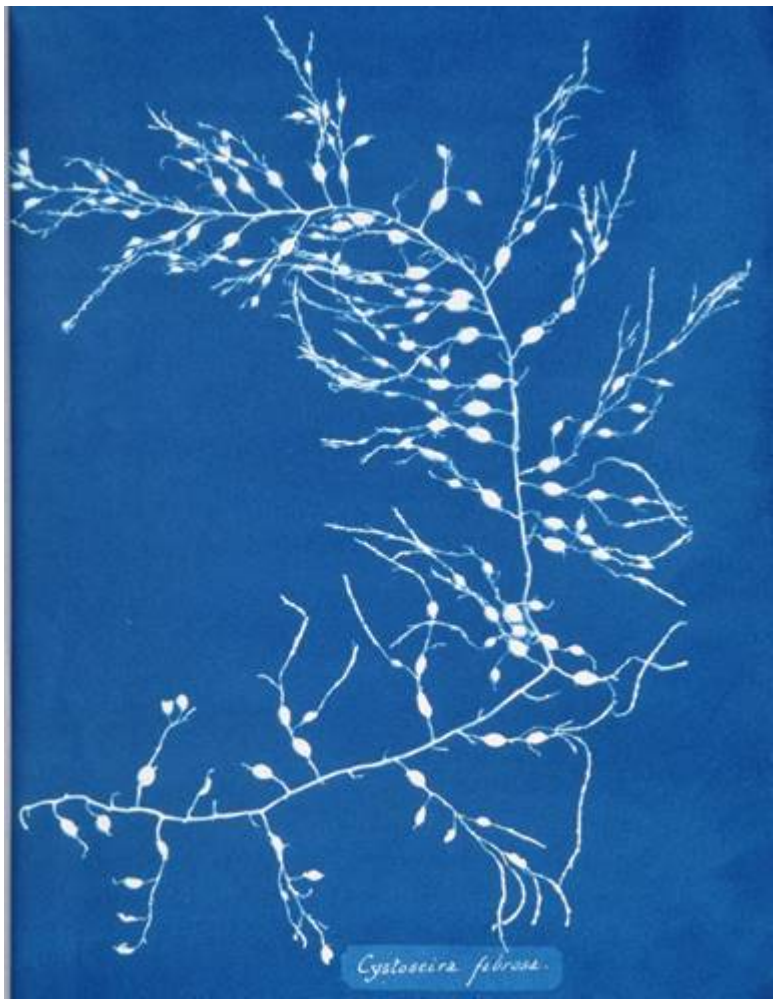
Part II

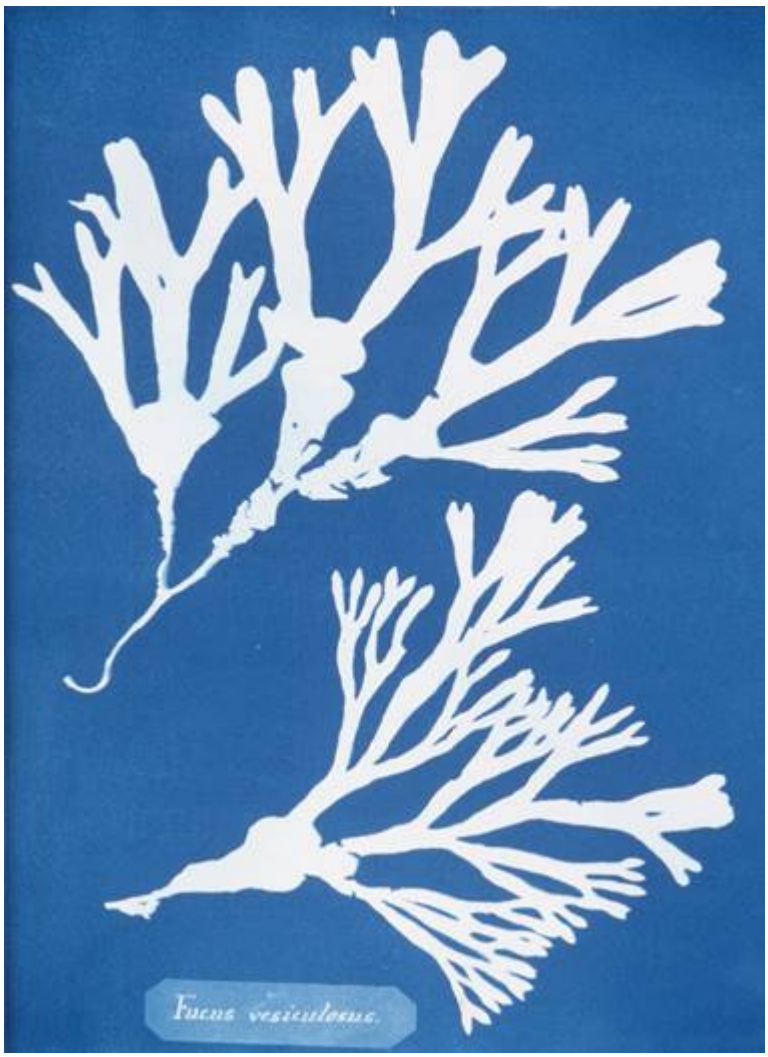
Contents.

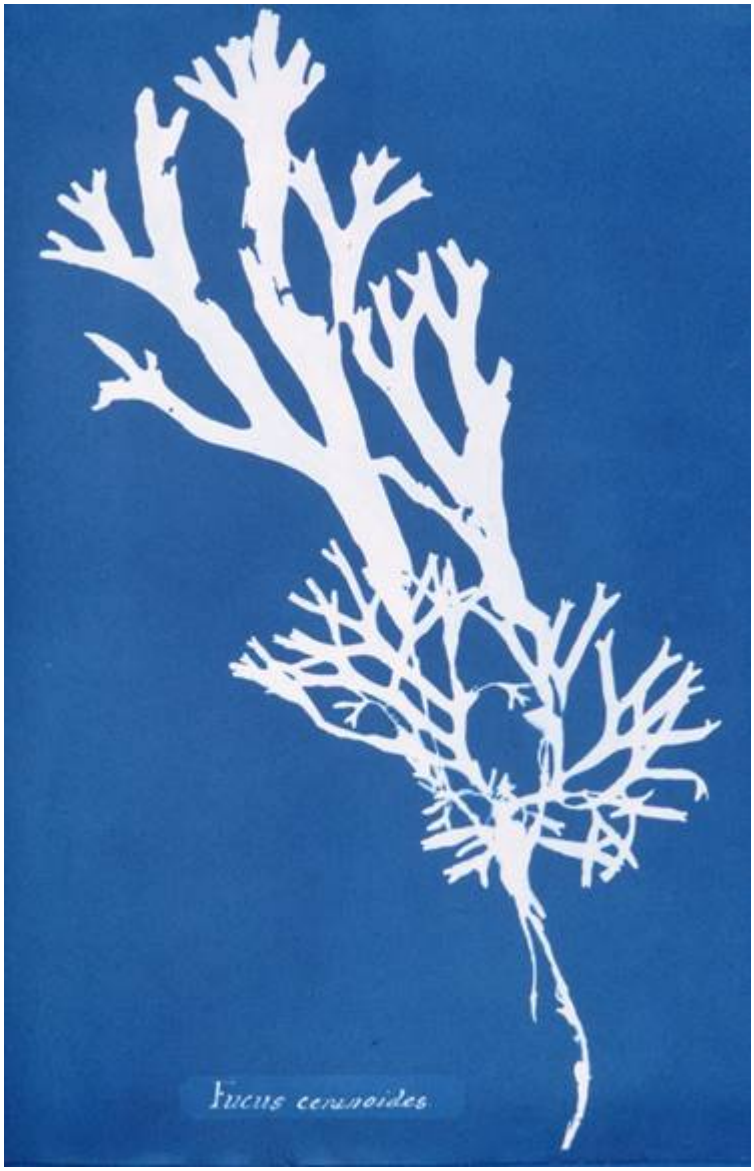
Cystoseira barbata.
---------- fibrosa.
Fucus vesiculosus.
----- ceranoides.
------ serratus.
------- nodosus.
----- canaliculatus.
Lichina pygmæa.
Laminaria digitata.
------- fascia.
Polyides rotundus.
Porphyra linearis


Cystoseira barbata.


Porphyra linearis.

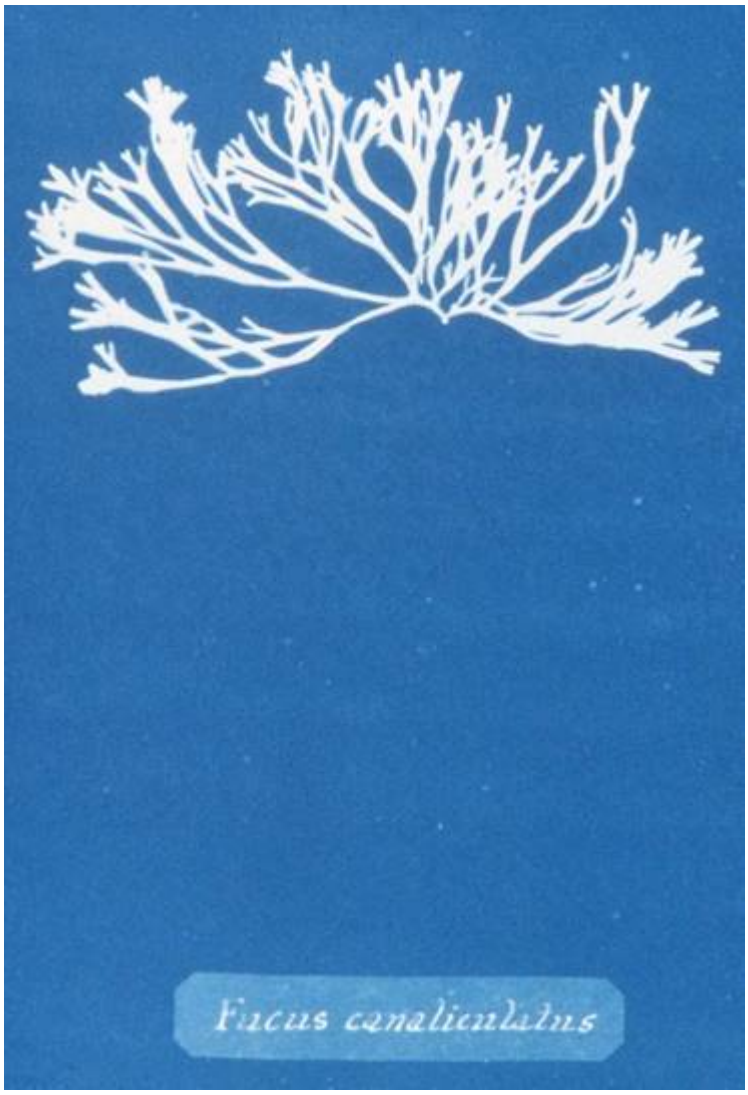

Cystoseira fibrosa.

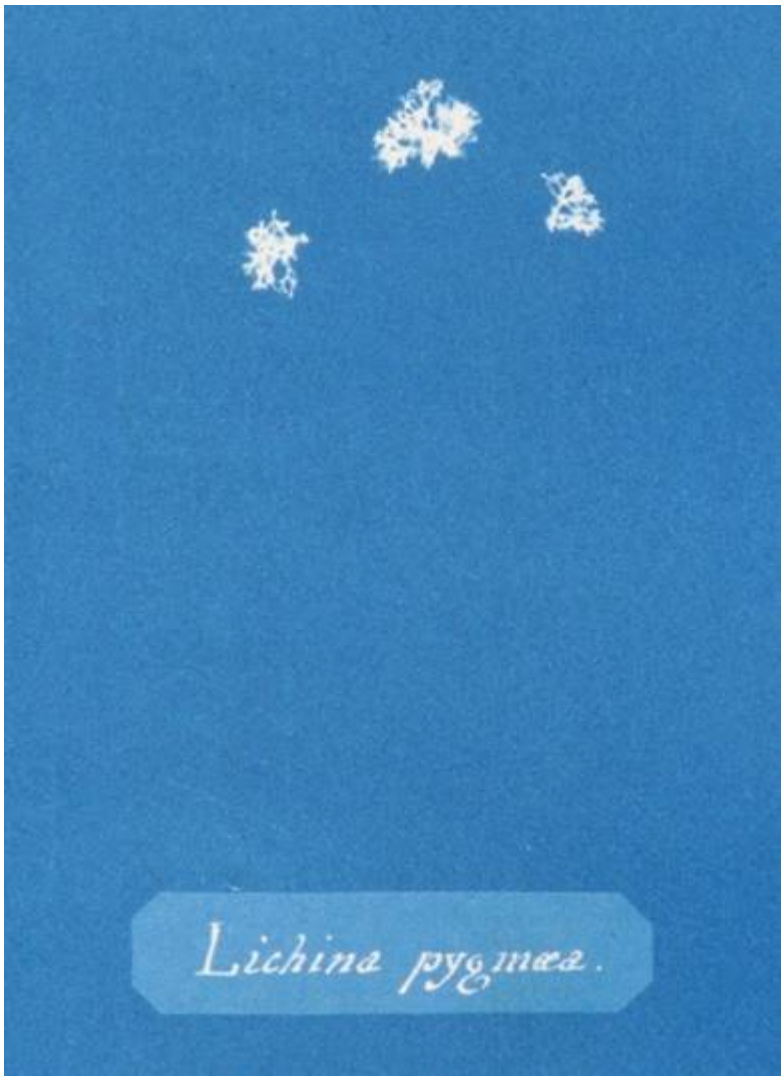

Fucus vesiculosus.


Fucus ceranoides

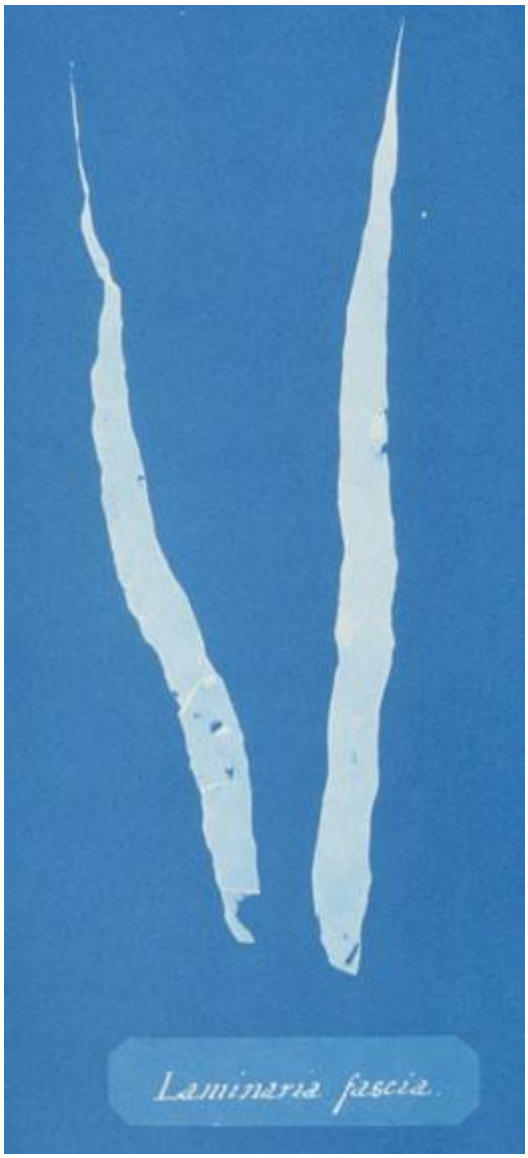

Fucus serratus

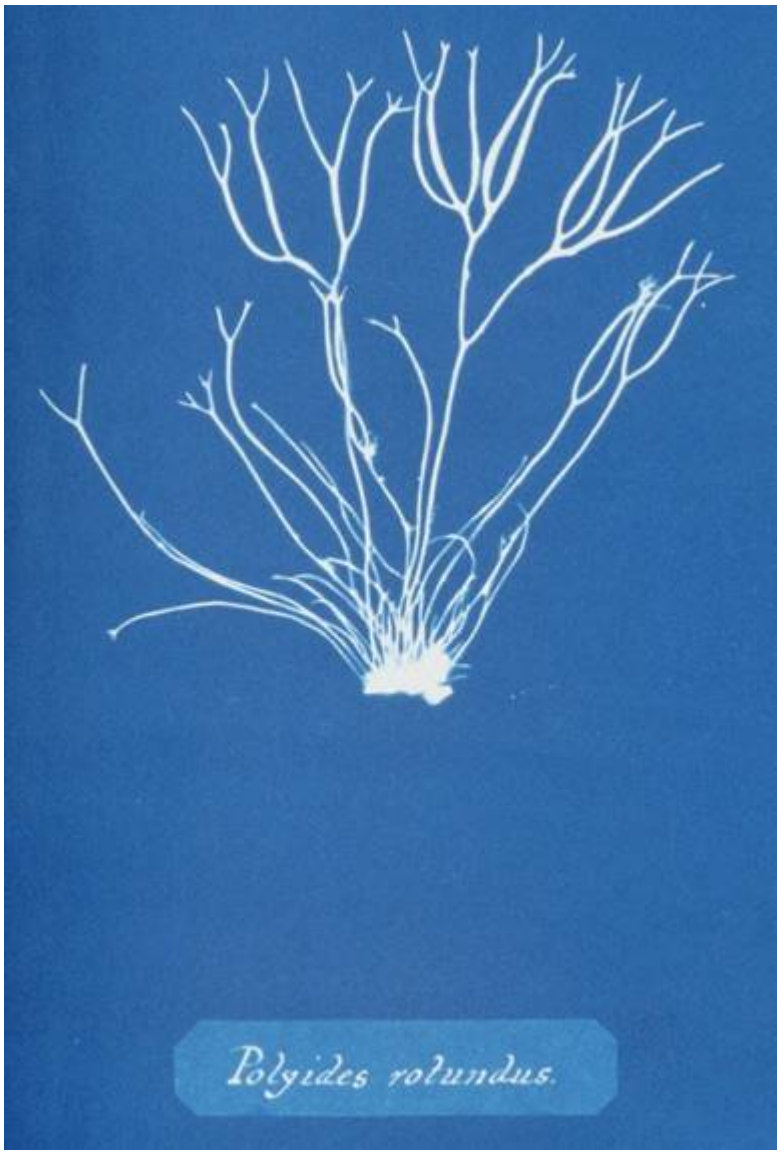

Fucus nodosus.


Fucus canaliculatus


Lichina pygmæa.


Laminaria digitata.

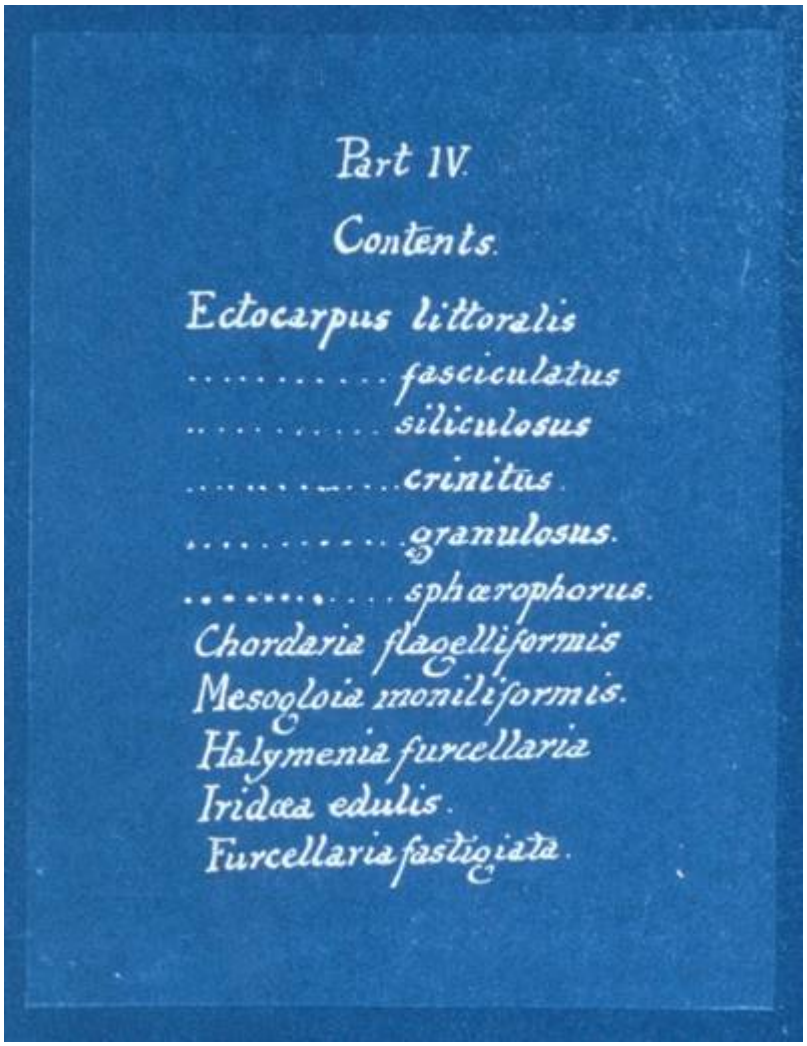

Laminaria fascia.


Polyides rotundus.

PART III

Part III was missing from this set of books.

PART IV


Part IV.

Contents.

Ectocarpus littoralis

..... fasciculatus

..... siliculosus

..... crinitus.

..... granulosus.

..... sphærophorus.

Chordaria flagelliformis

Mesogloia moniliformis.

Halymenia furcellaria

Iridæa edulis.

Furcellaria fastigiata.


Ectocarpus littoralis


Ectocarpus fasciculatus.


Ectocarpus siliculosus.

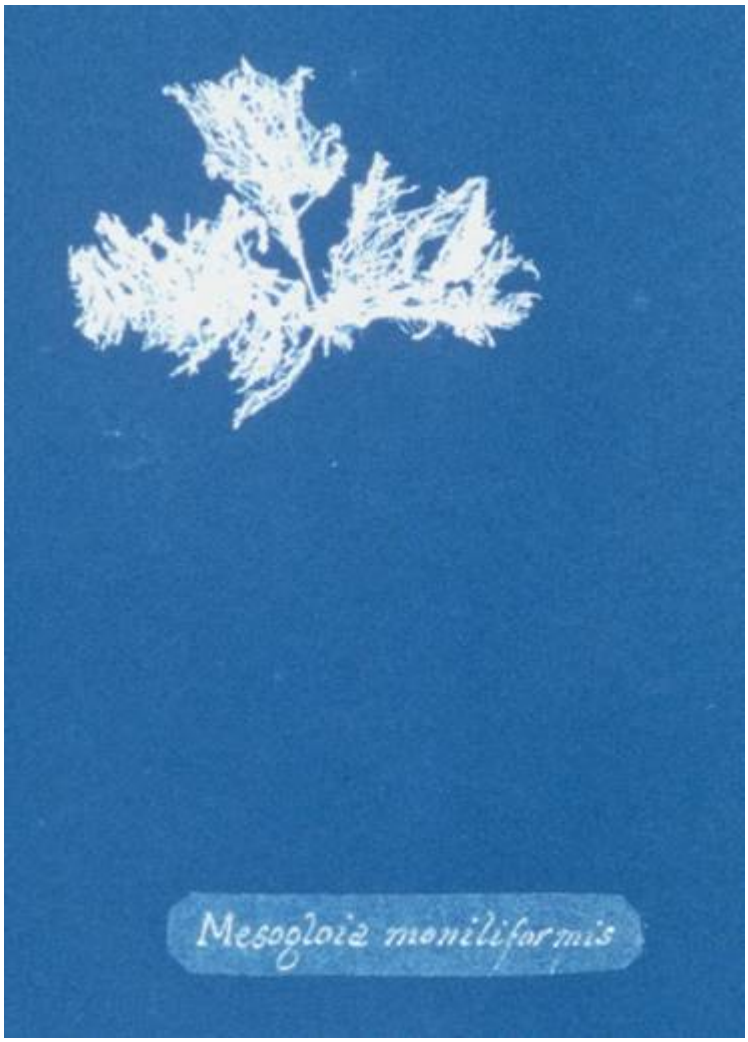

Ectocarpus crinitus.


Ectocarpus granulosus


Ectocarpus sphærophorus


Ectocarpus brachiatus.


Chordaria flagelliformis.

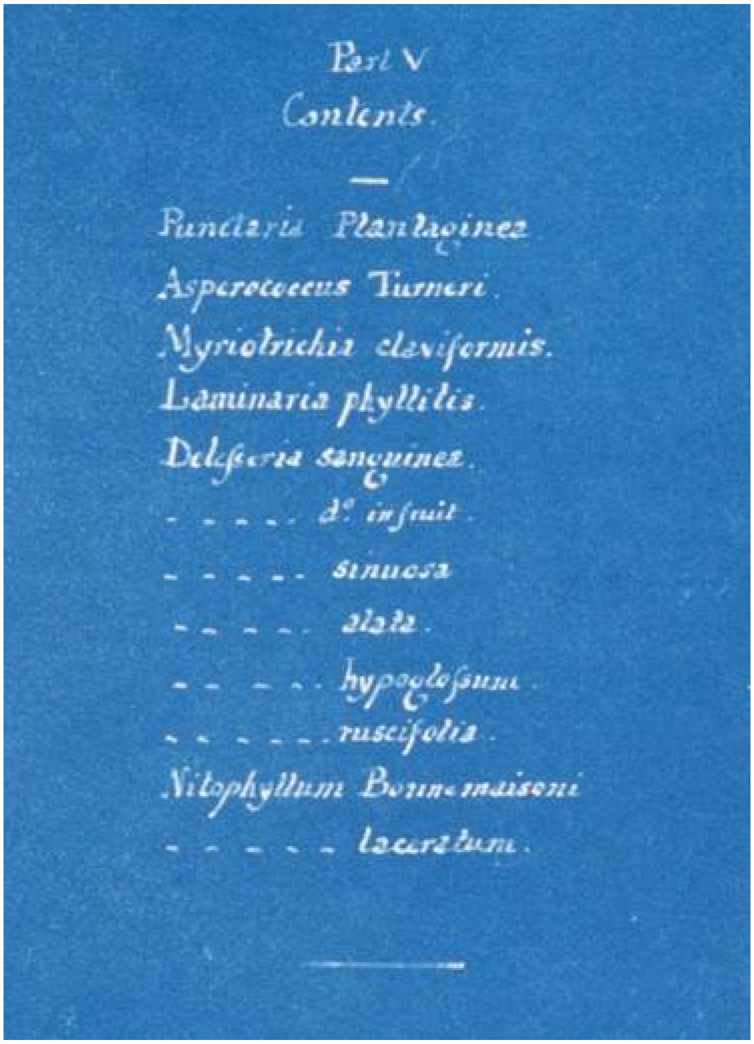

Mesogloia moniliformis


Halymenia furcellaria.


Iridæa edulis

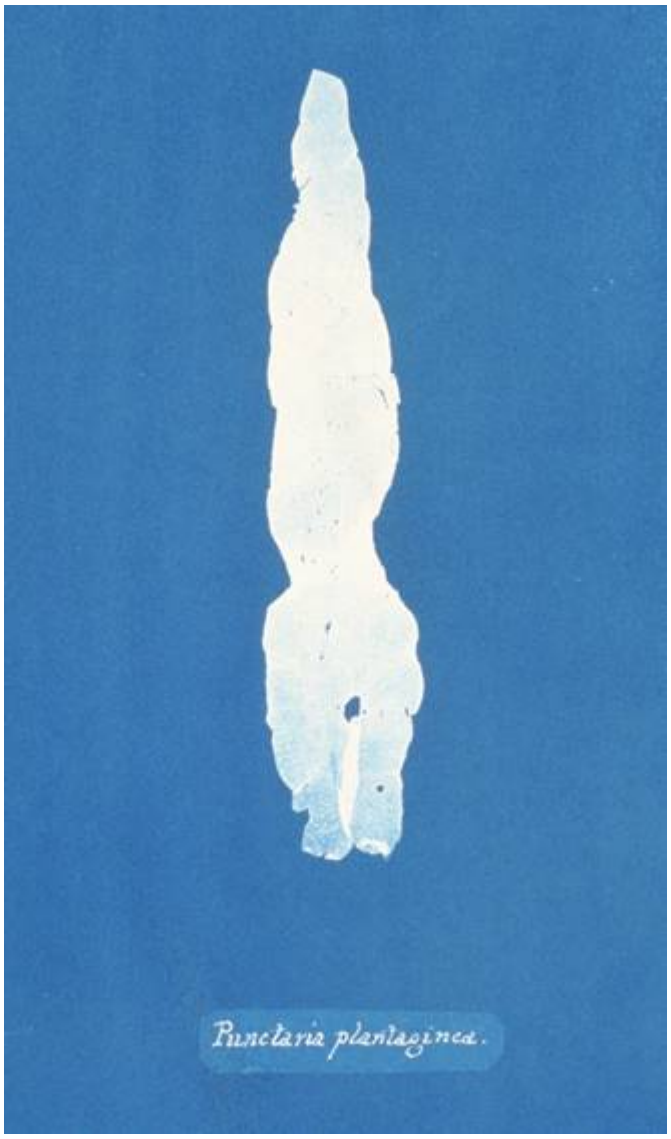

Furcellaria fastigiata.

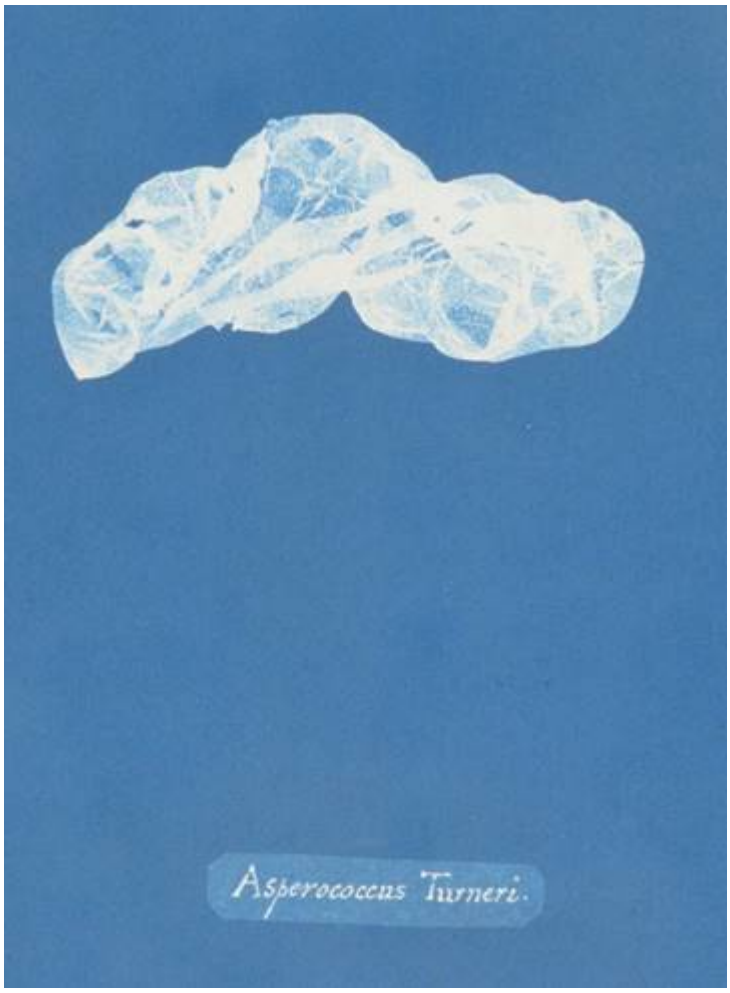
PART V

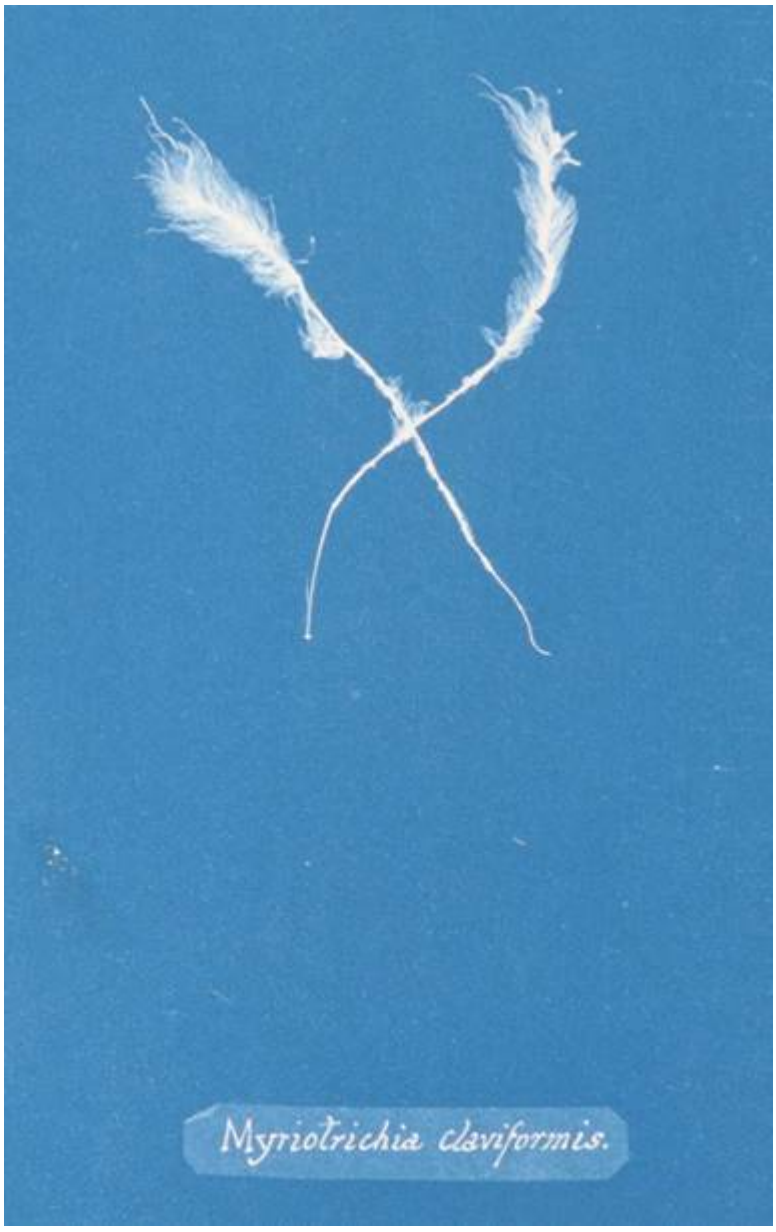


Part V

Contents.


Punctaria plantaginea.


Asperococcus Turneri.

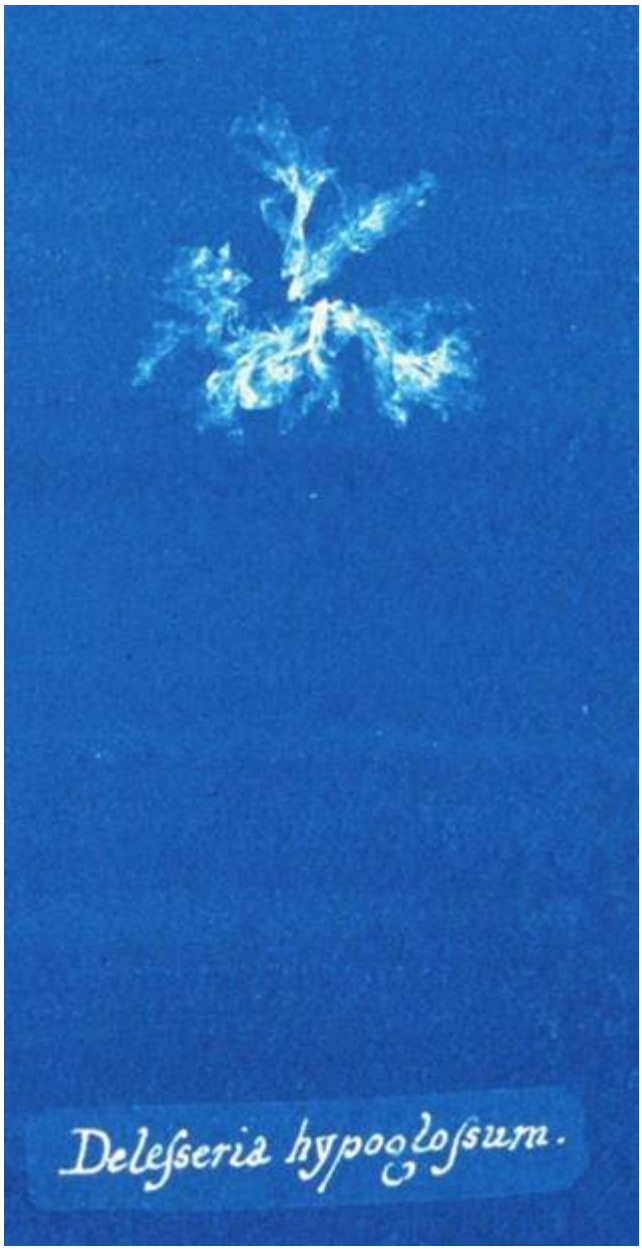

Myriotrichia claviformis.


Laminaria phyllitis.


Delesseria sanguinea
in fruit.


D. leperia sinuosa.


Delesseria alata

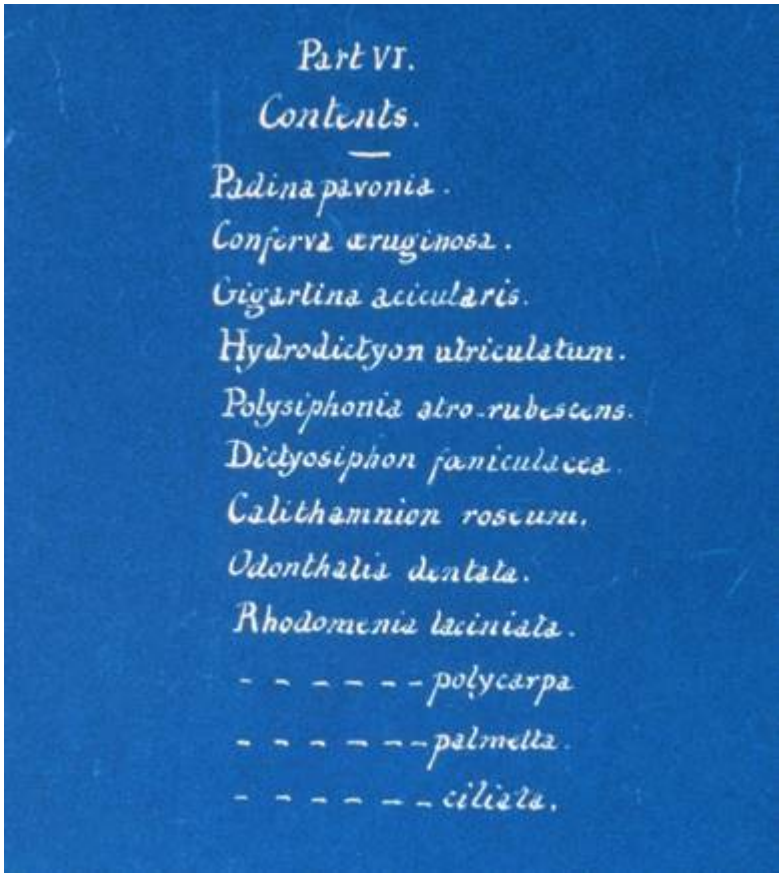

Delesseria hypoglossum.


Delyseria rusciſolia.

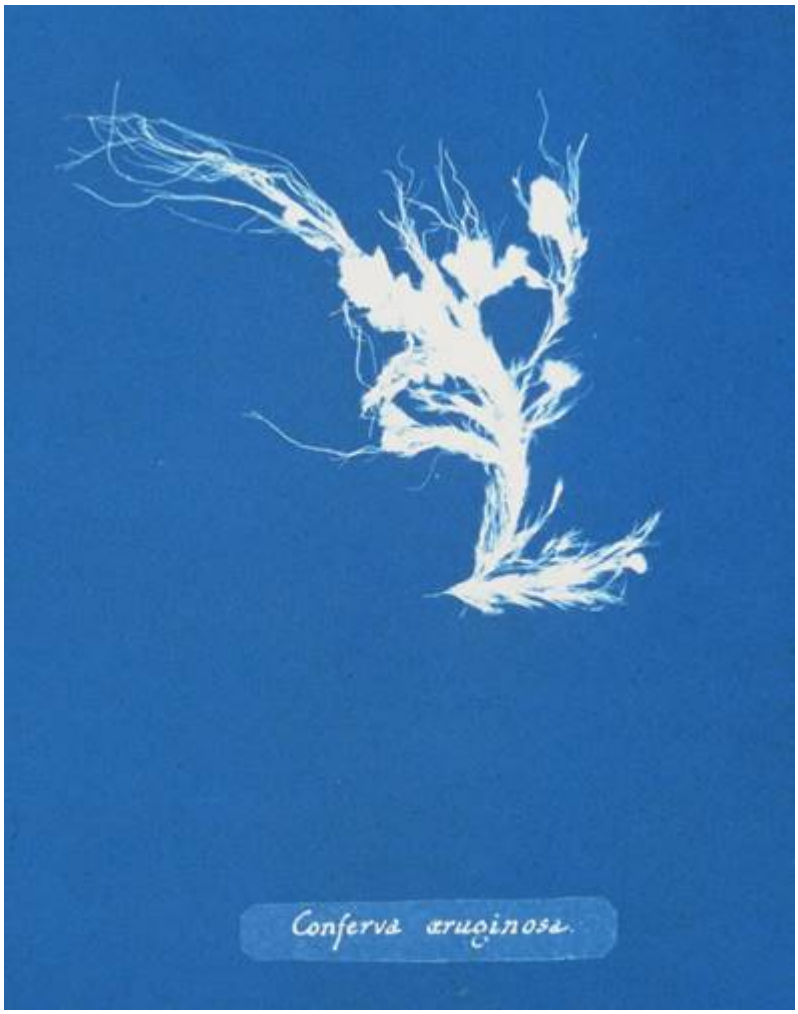

Nitophyllum Bonnemaisoni.

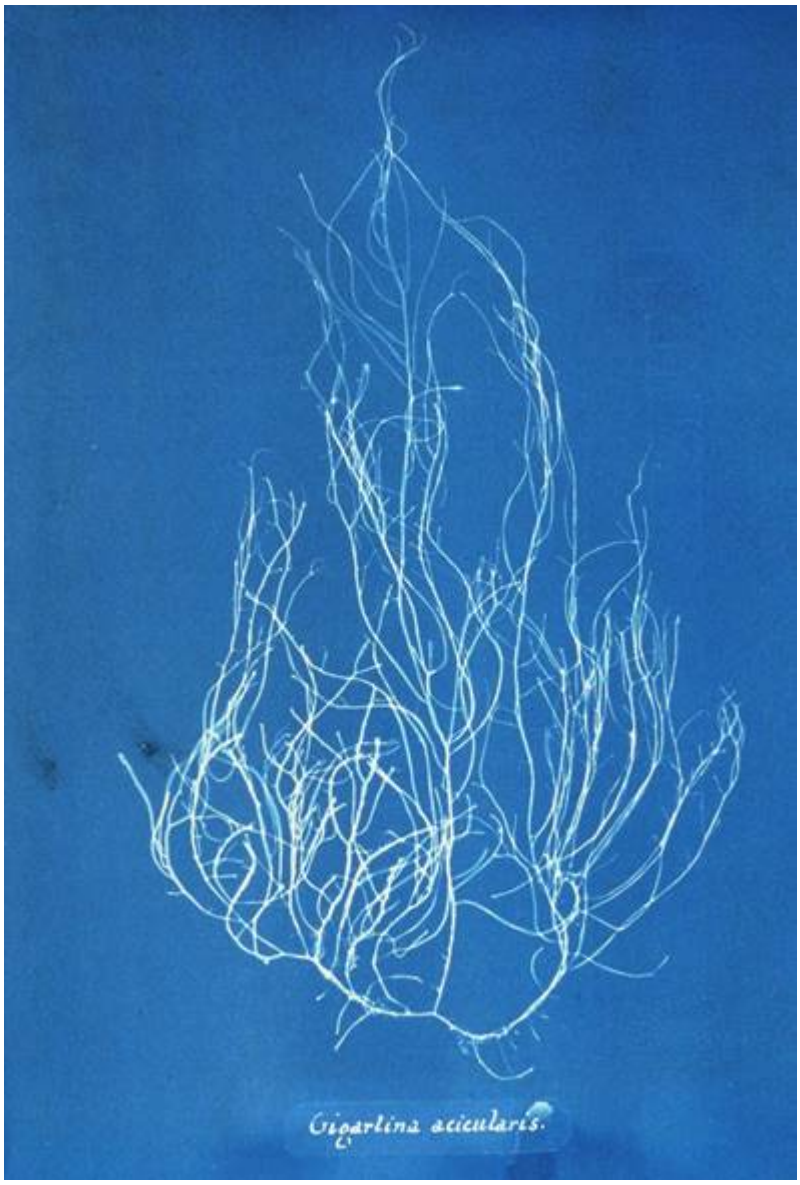

Nitophyllum laceratum.

PART VI

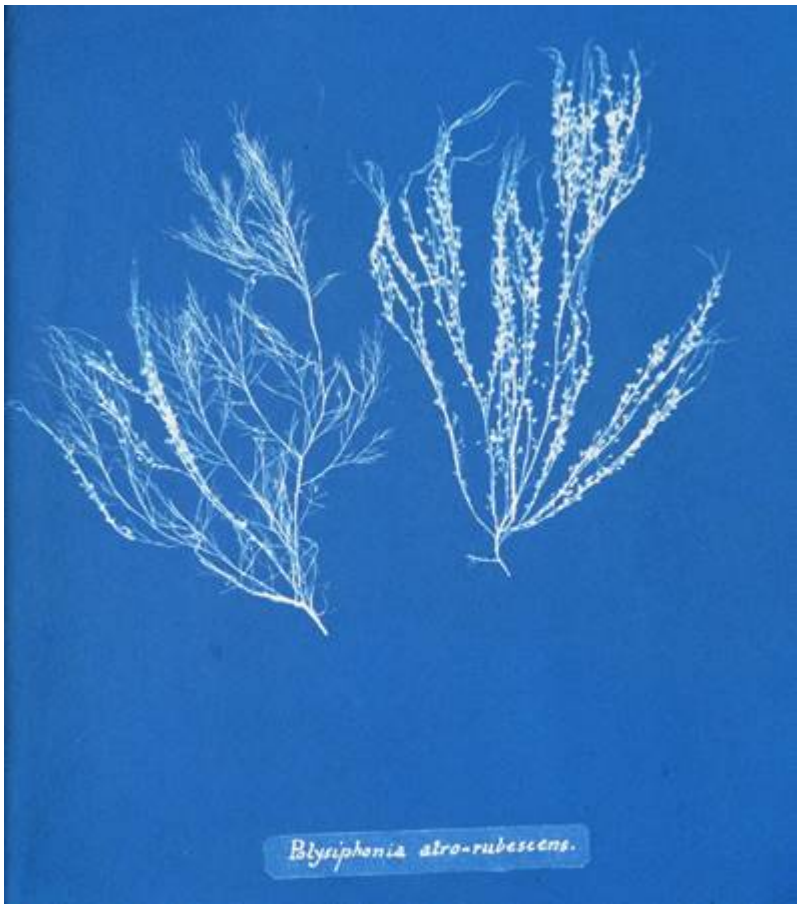

Part VI.
Contents.
Padina pavonia.
Conferva aruginosa.
Gigartina acicularis.
Hydrodictyon utriculatum.
Polysiphonia atro-rubescens.
Dictyosiphon faniculacea.
Calithamnion roseum.
Odonthalia dentata.
Rhodomenia laciniata.
- - - - - - polycarpa
- - - - - - palmetta.
- - - - - - ciliata.

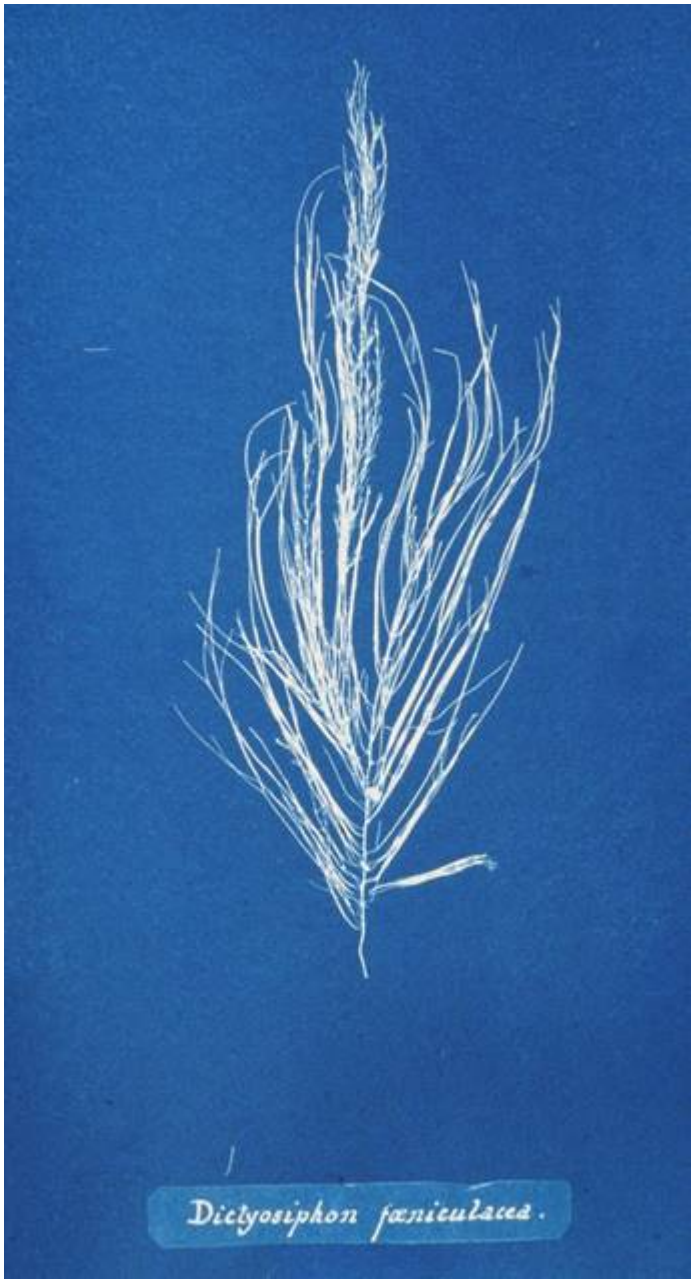

Padina pavonia.


Conferva æruginosa.


Gigartina acicularis.


Hydrodictyon utriculatum.

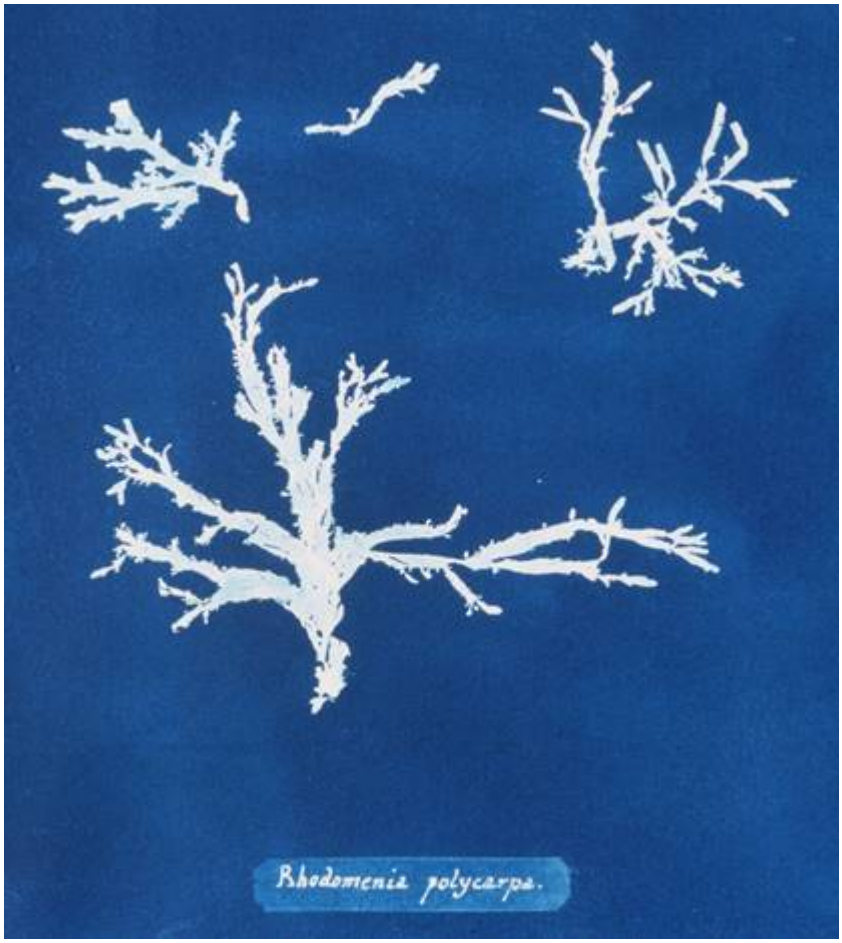

Polysiphonia atro-rubescens.


Dictyosiphon fœniculacea.


Callithamnion roseum


Odonthalia dentata.

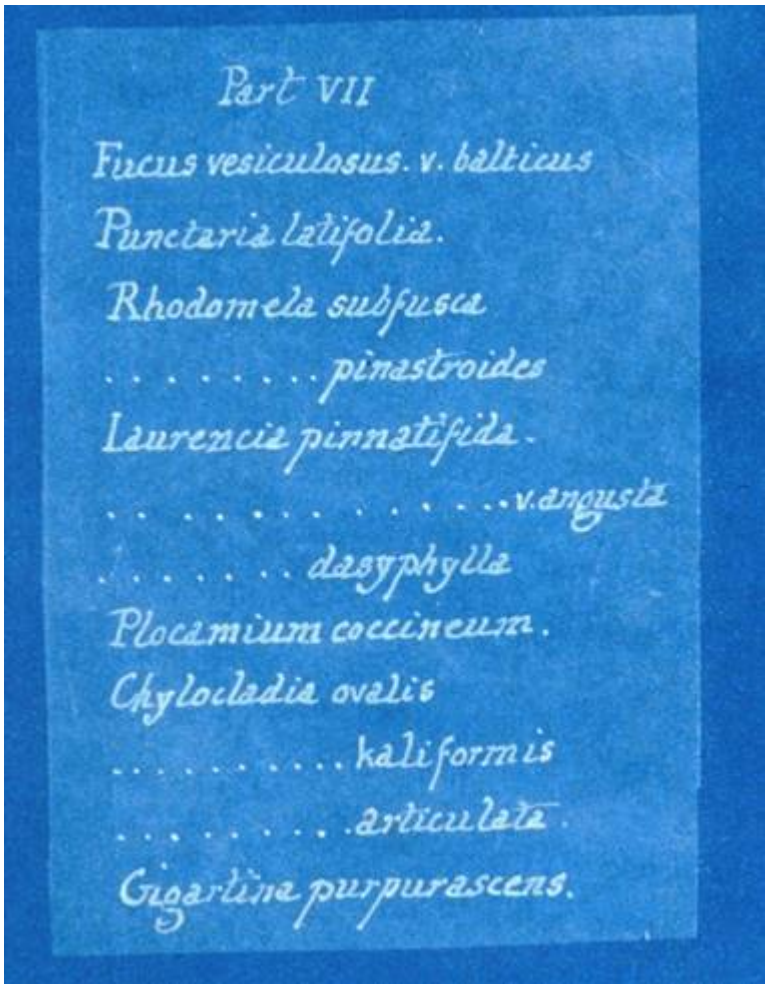

Rhodomenia laciniata.


Rhodomenia polycarpa.

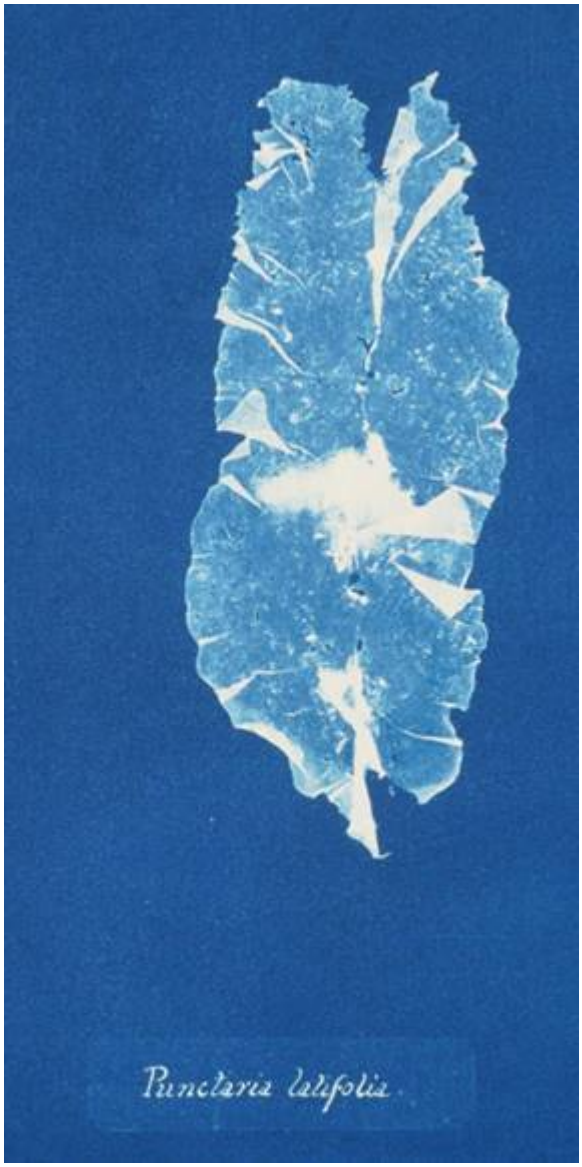

Rhodomenia palmetta.

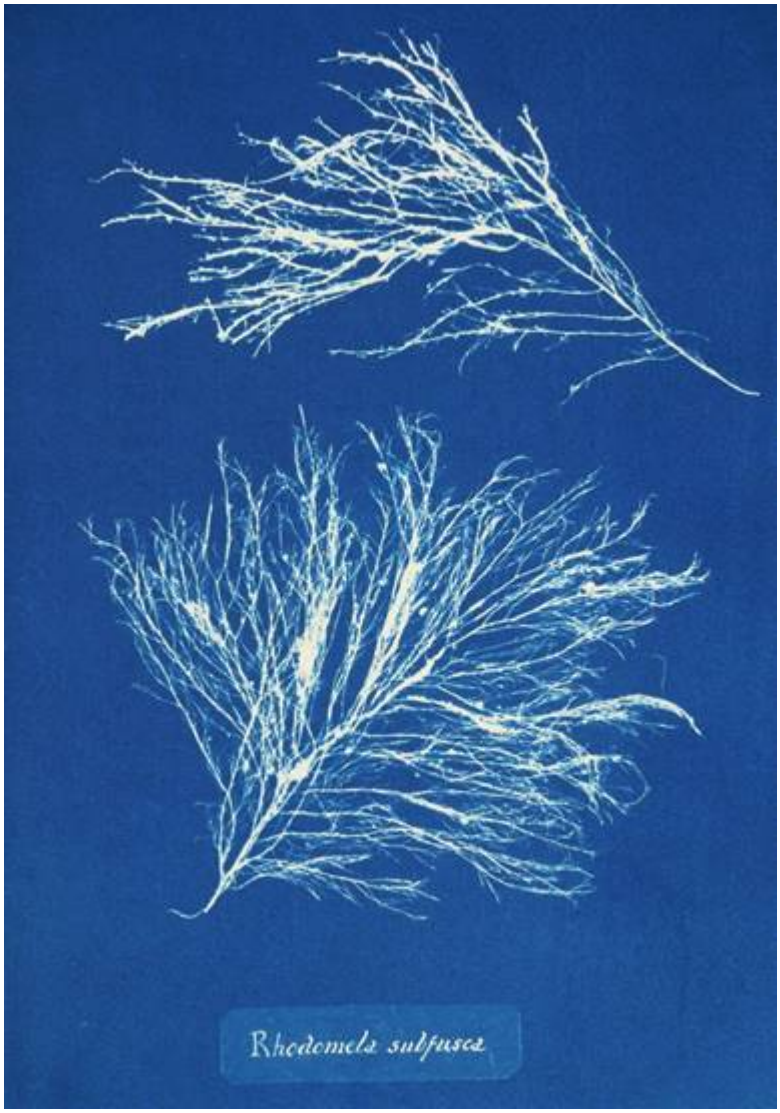

Rhodomenia ciliata

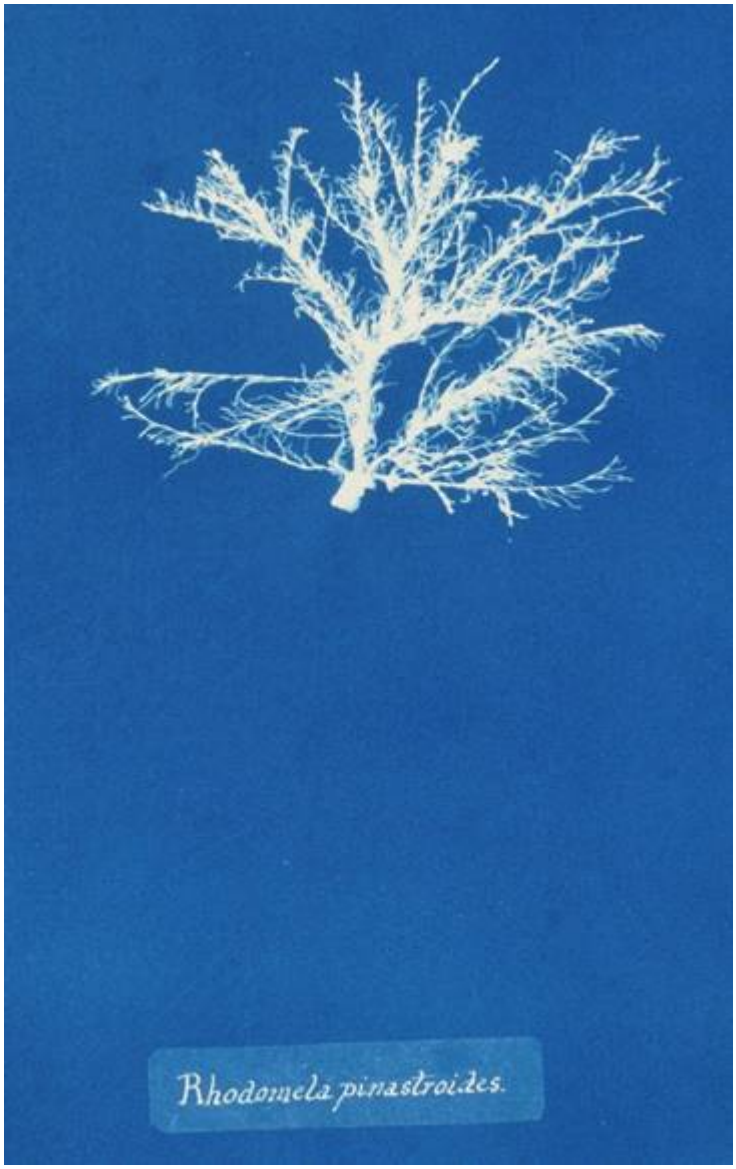
PART VII


Part VII
Fucus vesiculosus. v. balticus
Punctaria latifolia.
Rhodomela subfusca
. . . . . pinastroides
Laurencia pinnatifida.
. . . . . v. angusta
. . . . . dasyphylla
Plocamium coccineum.
Chylocladia ovalis
. . . . . kaliformis
. . . . . articulata.
Gigartina purpurascens.

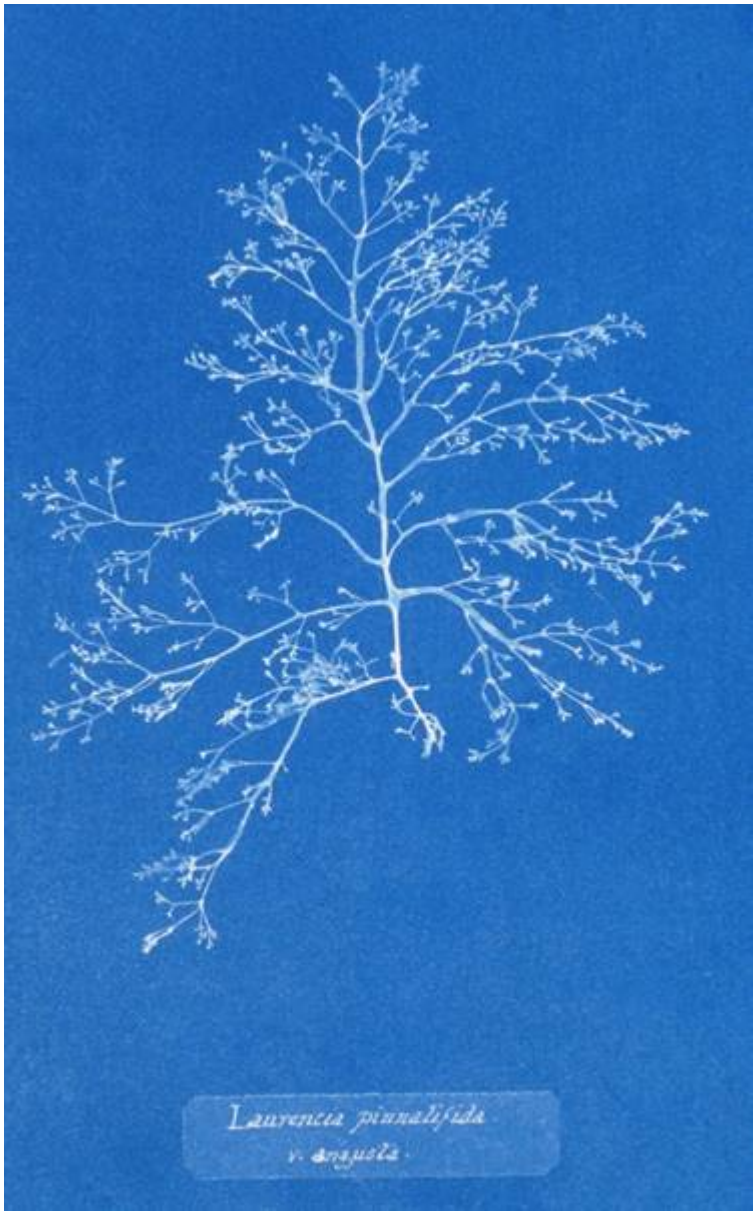

Fucus vesiculosus.
β baltícus.

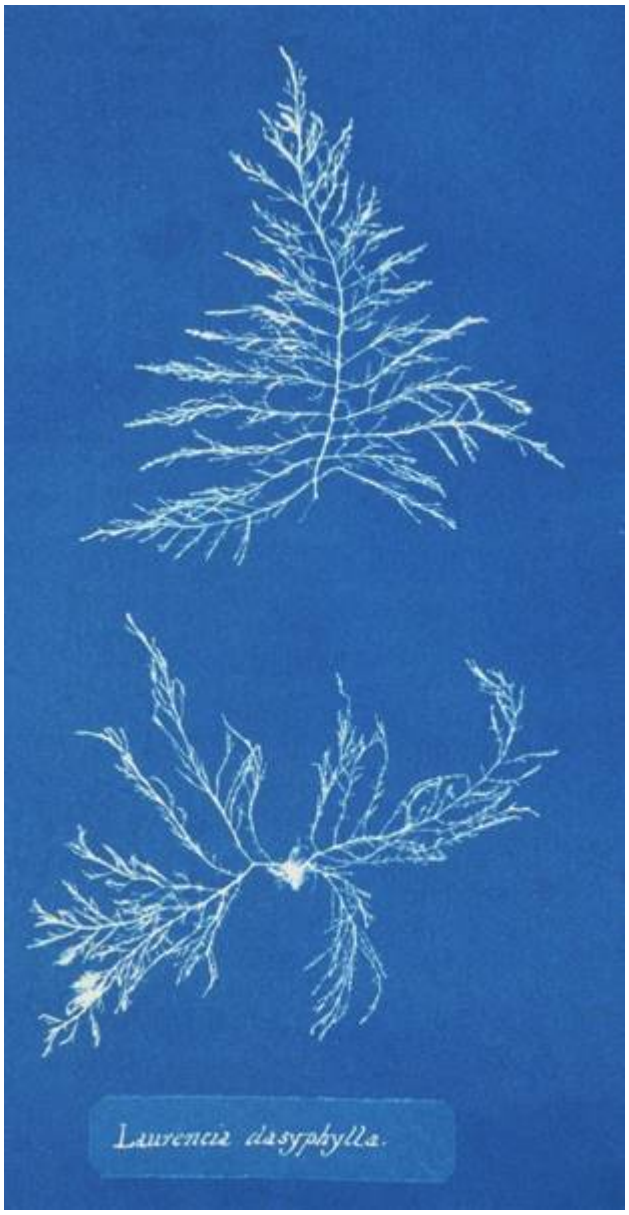

Punctaria latifolia

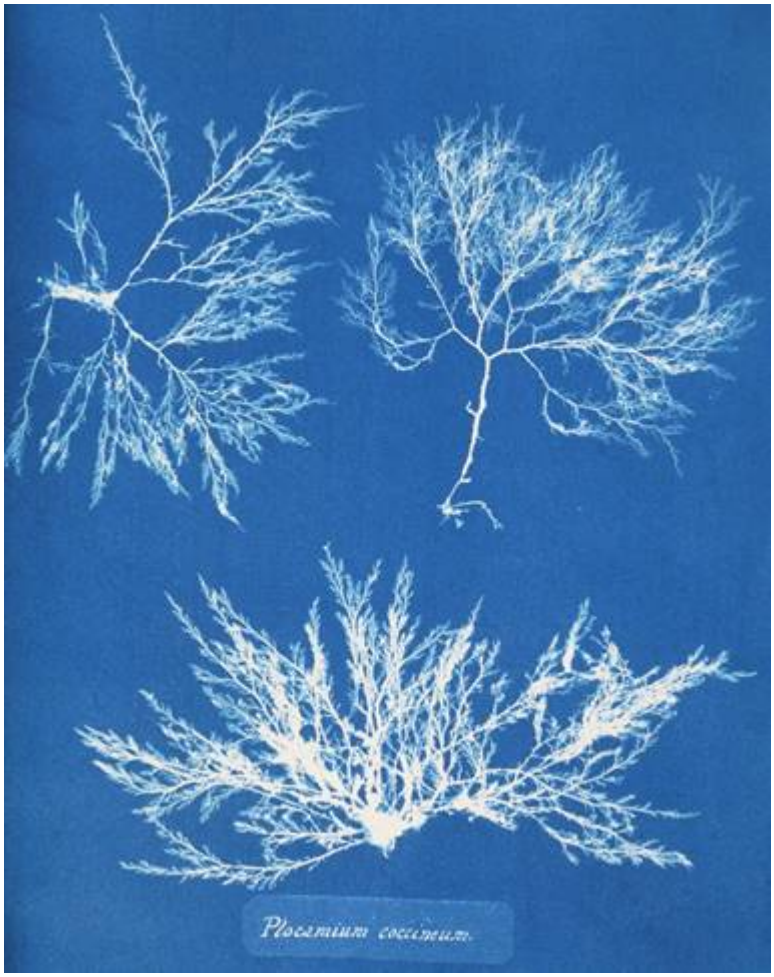

Rhodomela sulfusca

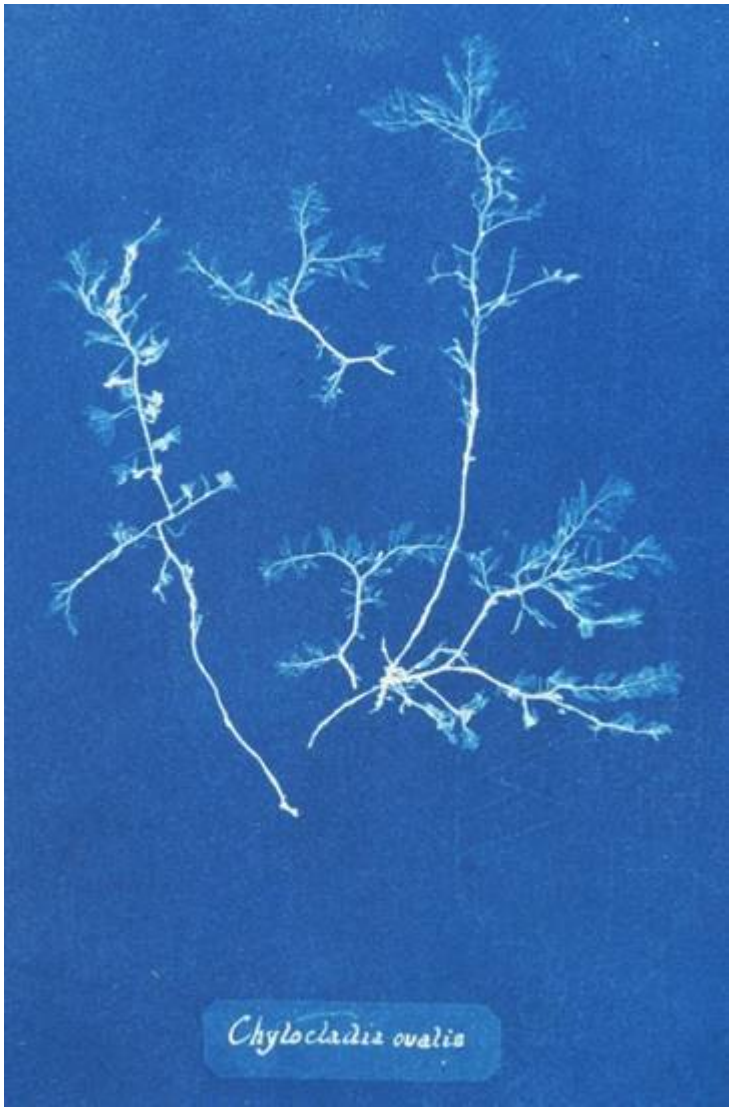

Rhodomela pinastroides.

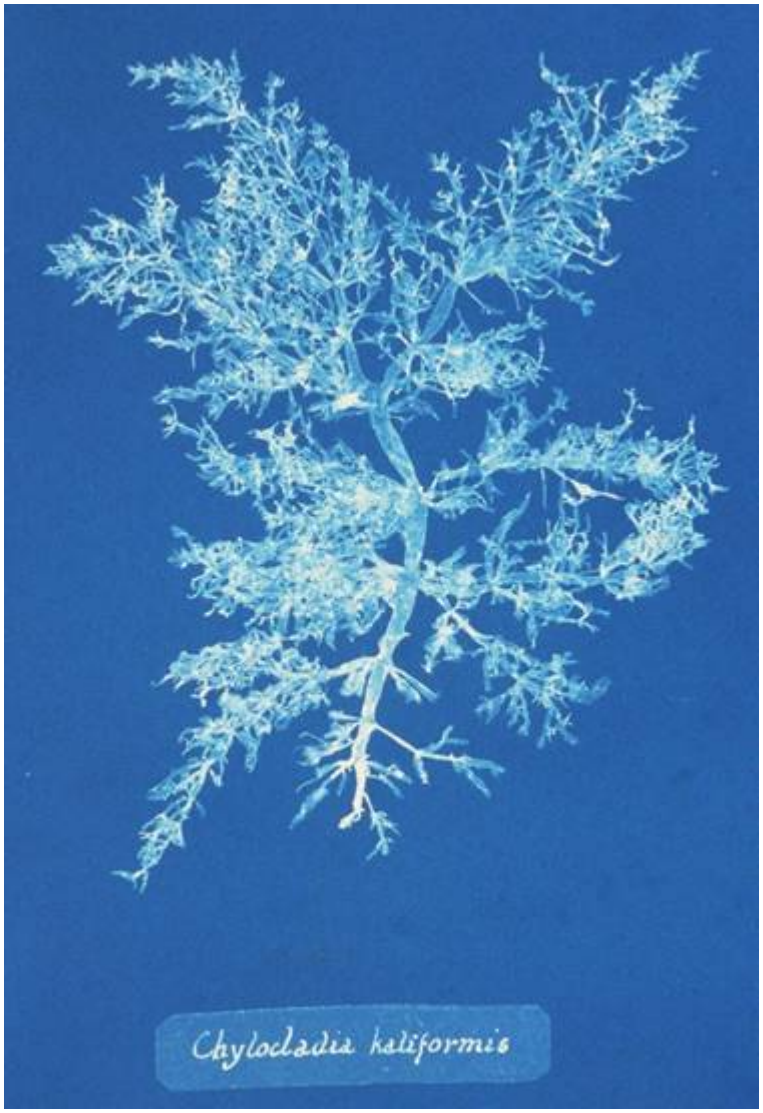

Laurencia pinnatifida.


Laurencia pinnatifida
v. angusta

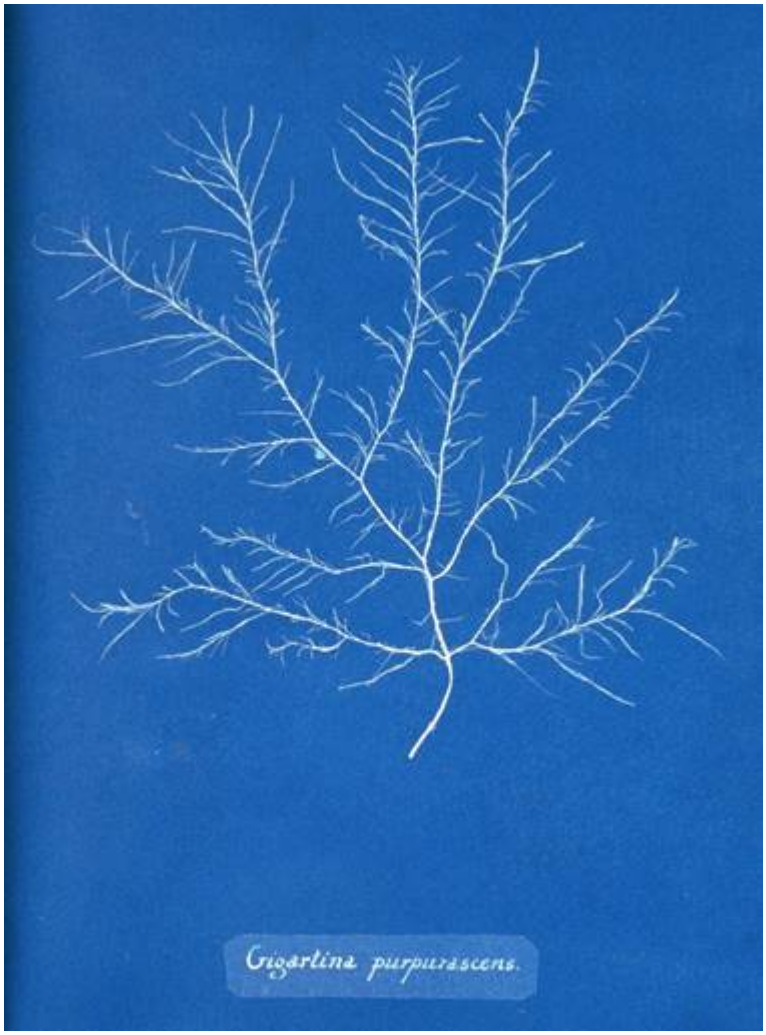

Laurencia dasyphylla.


Plocamium coccineum.


Chylocladia ovalis

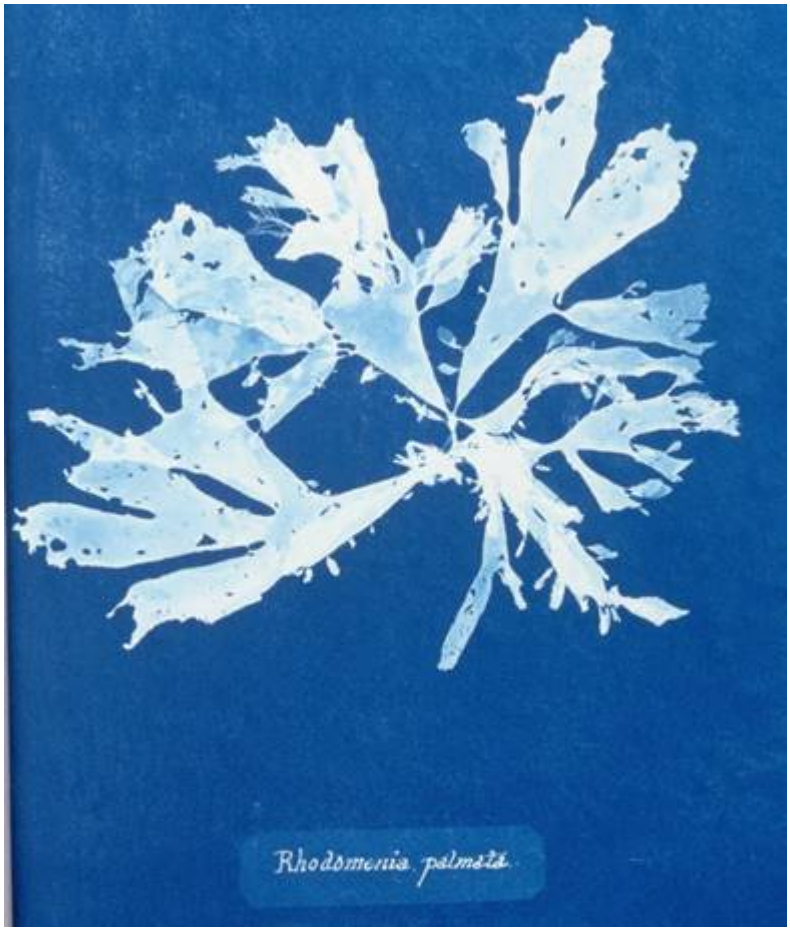

Chylocladia kaliformis

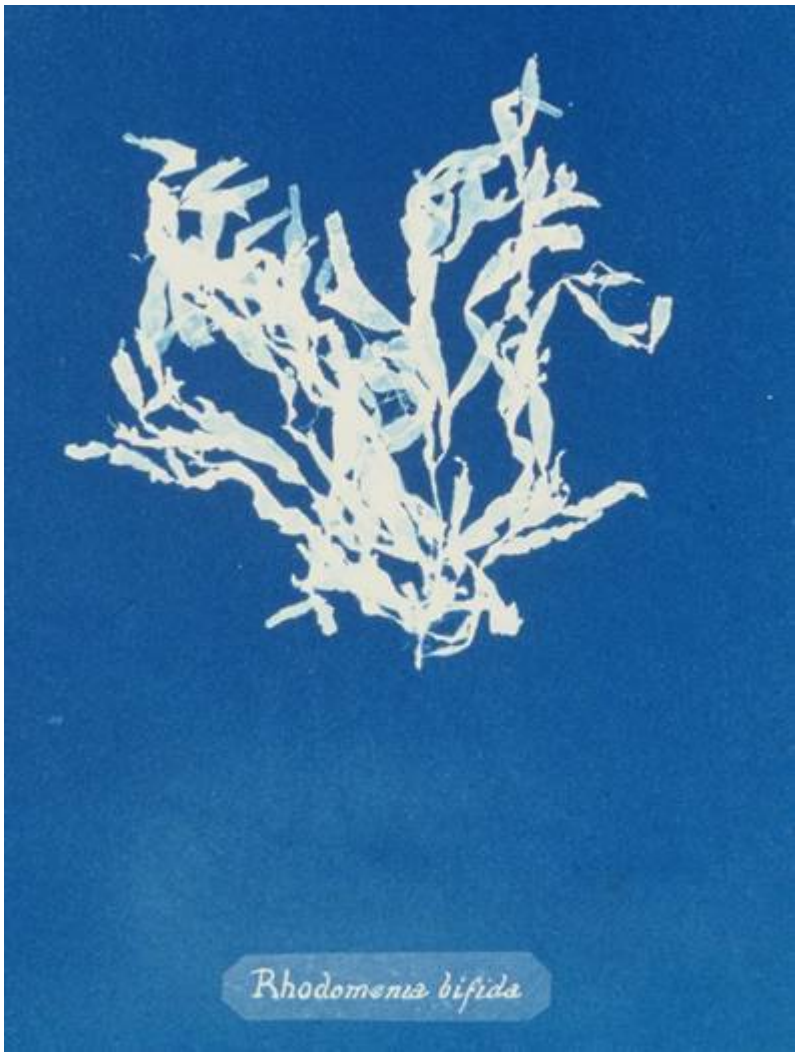

Chylocladia articulata

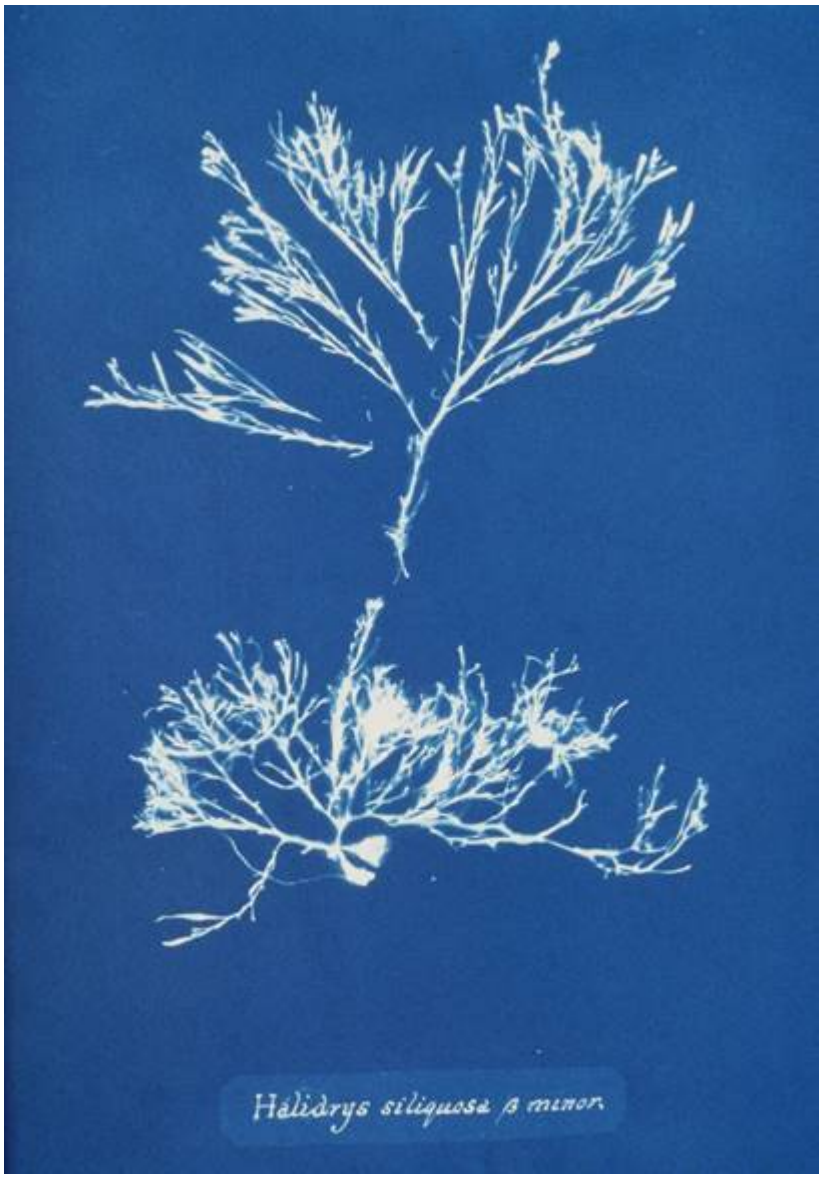

Gigartina purpurascens.

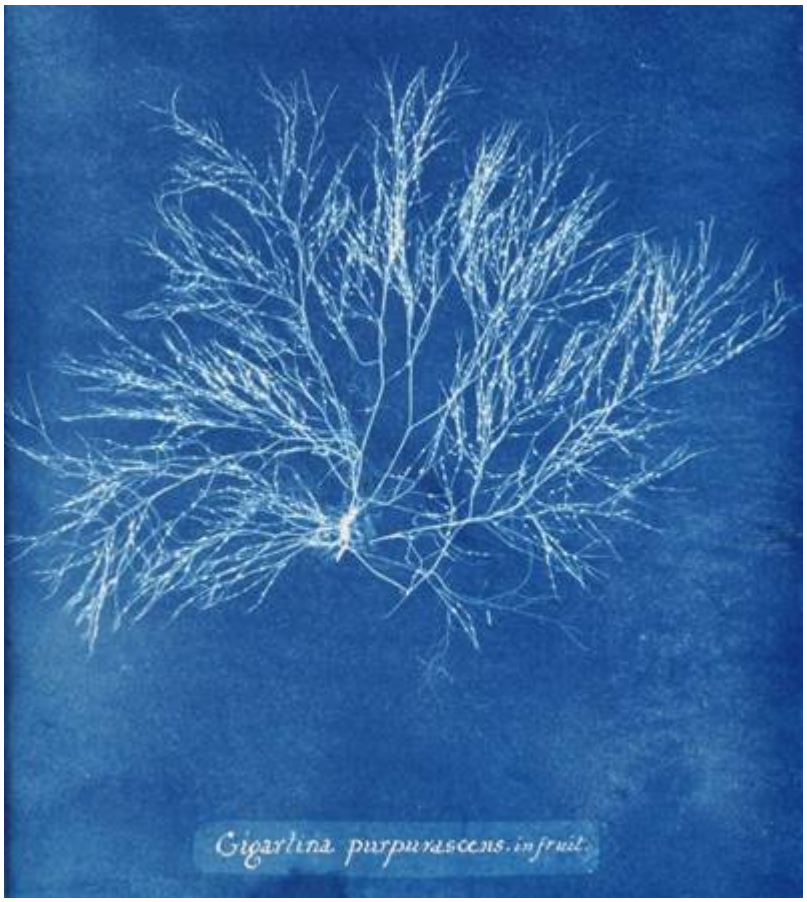
PART VIII


Part VIII.
Rhodomenia palmata.
..... bifida.
Halydrys siliquosa. β minor.
Gigartina purpurascens (in fruit.)
..... confervoides
..... Griffithsiæ.
..... plicata
Chondrus mamillosus
..... crispus.
..... c. var.
..... norvegicus
..... membranifolius.

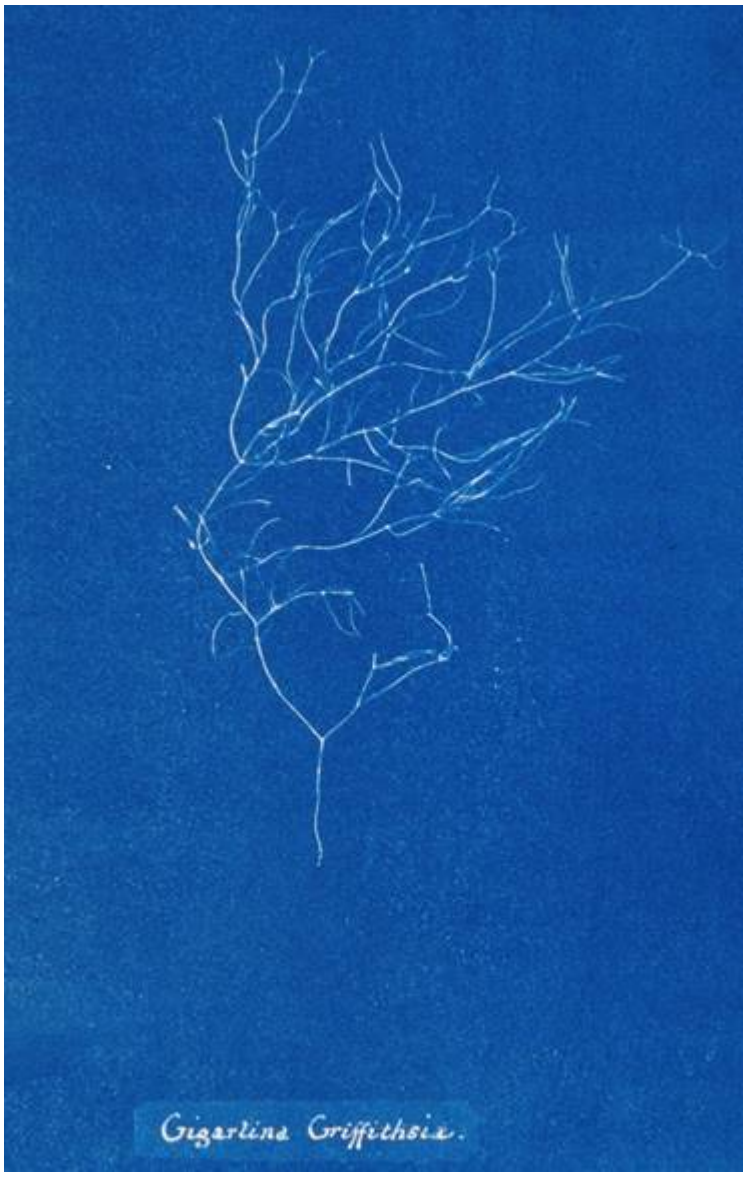

Rhodomenia palmata


Rhodomenia bifida


Halidrys siliquosa β minor.


Gigartina purpurascens. in fruit.

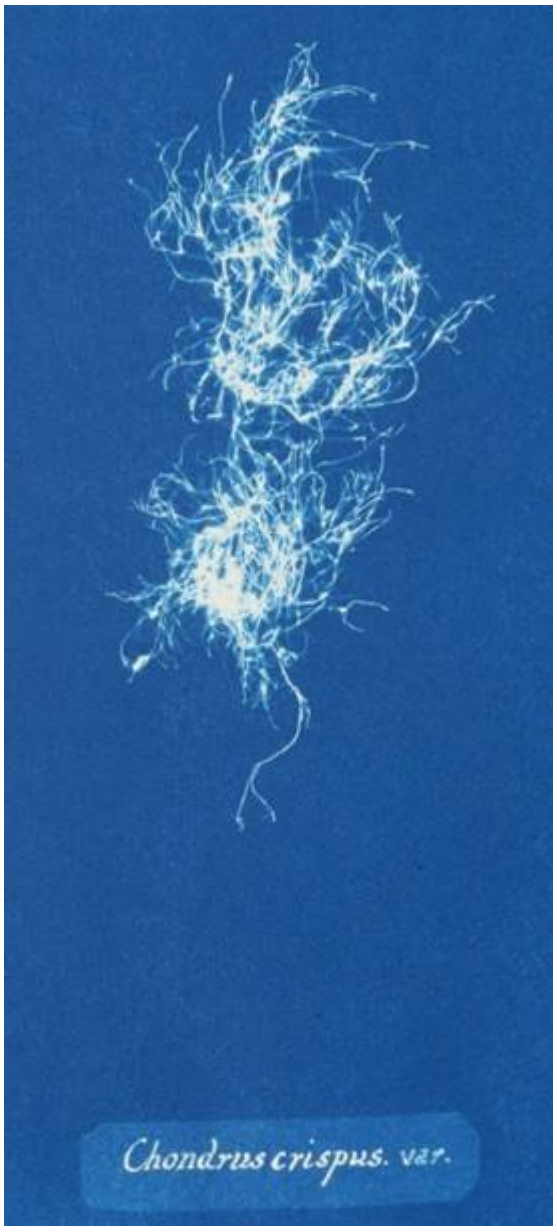

Gigartina confervoides.

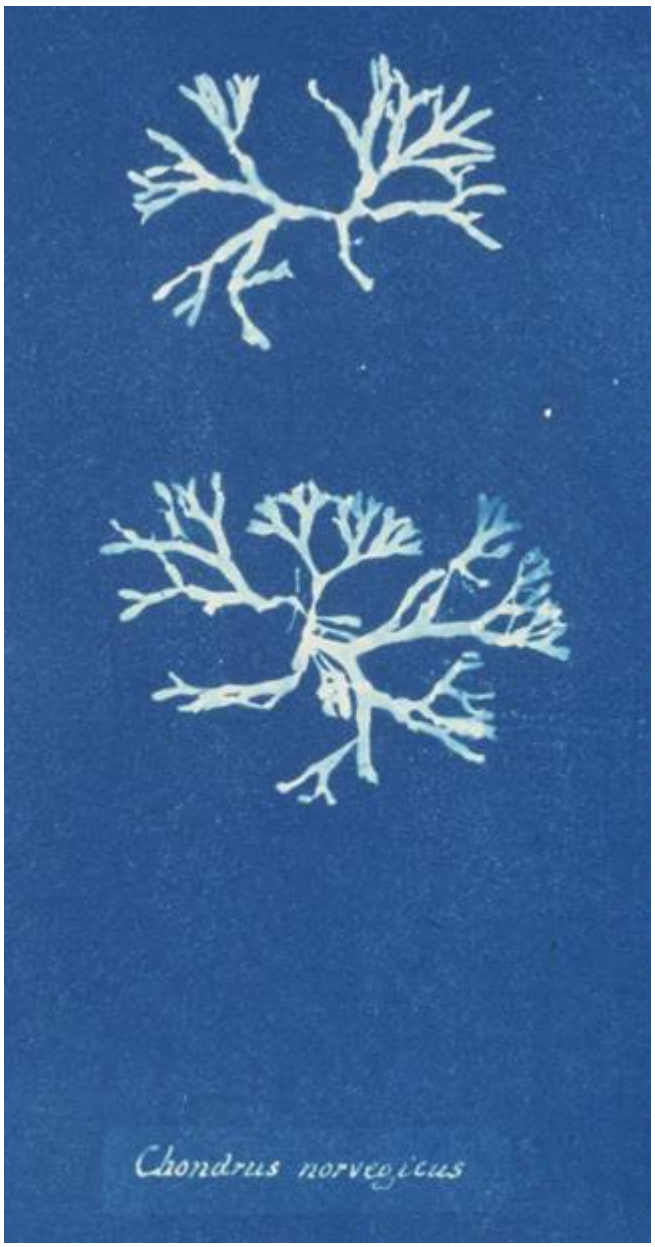

Gigartina Griffithsiæ.


Gigartina plicata


Chondrus mamillosus.

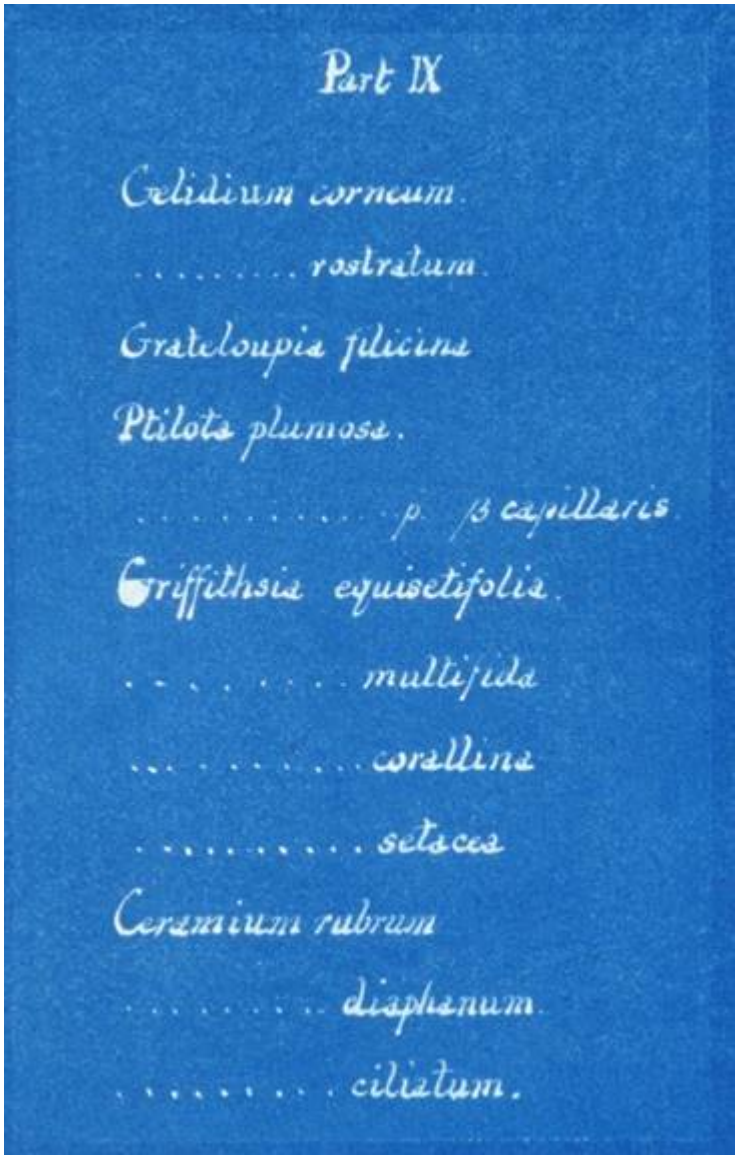

Chondrus crispus.

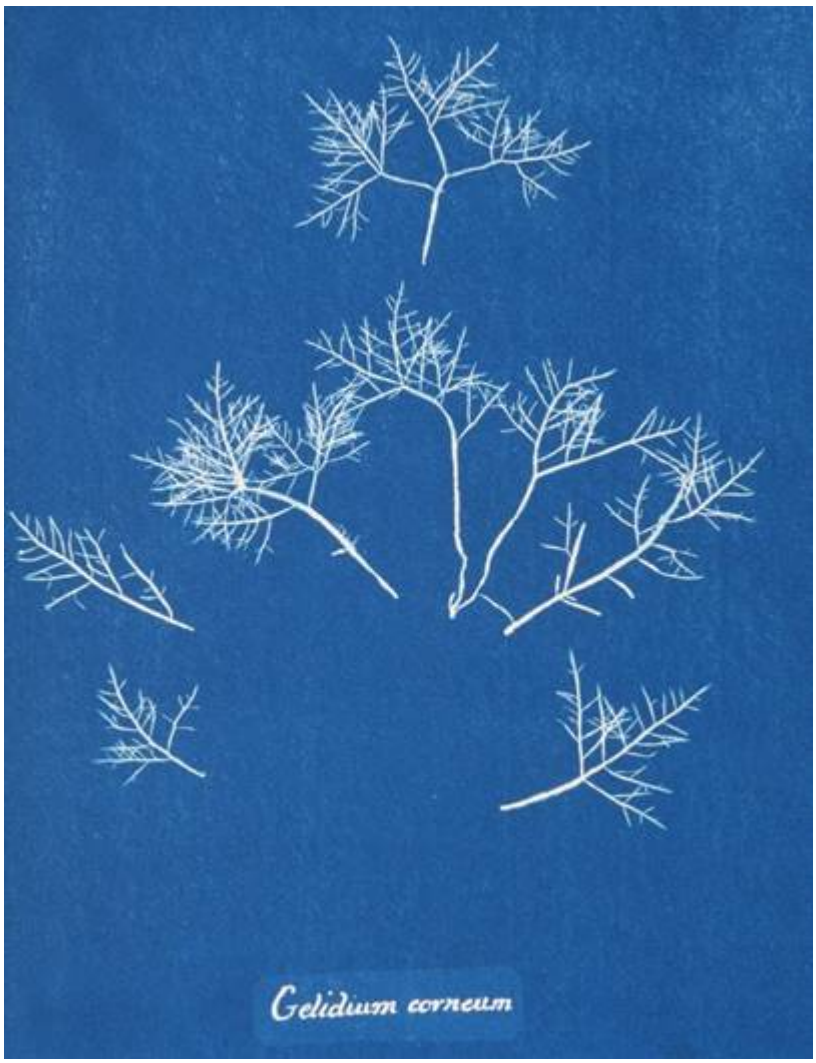

Chondrus crispus. var.


Chondrus norvegicus


Chondrus membranifolius.

PART IX


Part IX
Celidium corneum.
. . . . . rostratum.
Grateloupia filicina
Ptilota plumosa.
. . . . . p. β capillaris
Griffithsia equisetifolia.
. . . . . multifida
. . . . . corallina
. . . . . setacea
Ceramium rubrum
. . . . . diaphanum.
. . . . . ciliatum.

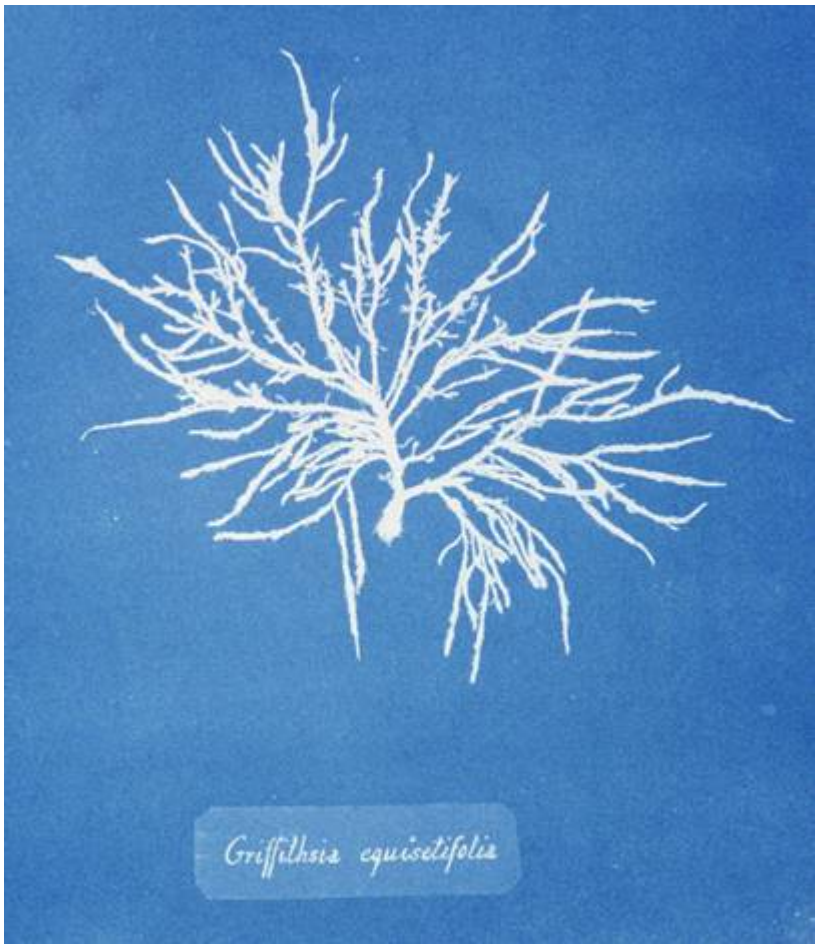

Gelidium corneum

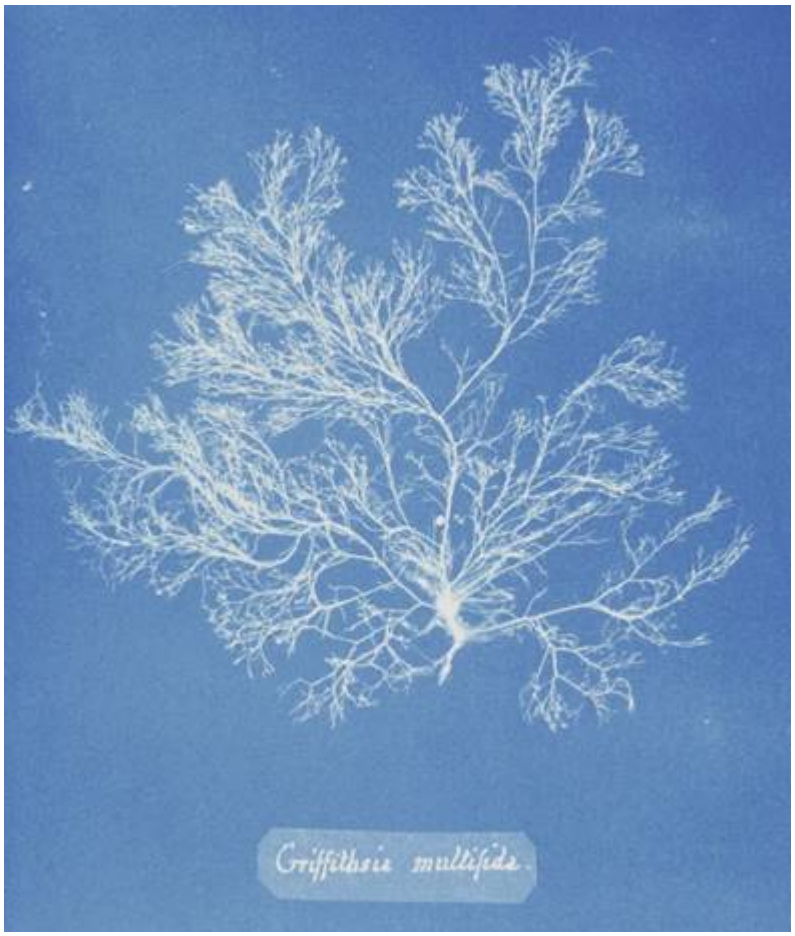

Gelidium rostratum.

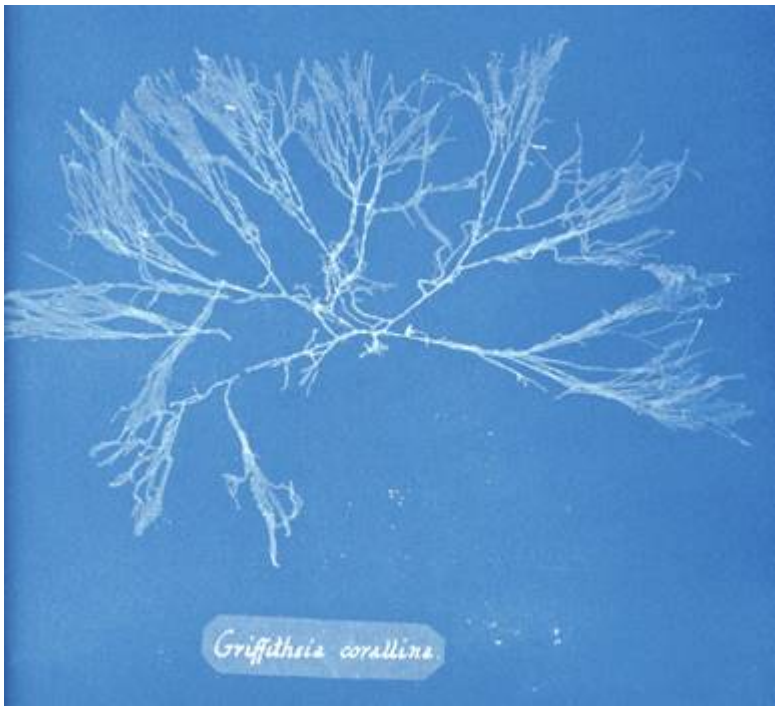

Crateloupia filicina.


Ptilota plumosa.


Ptilota plumosa. β capillaris.


Griffithsia equisetifolia

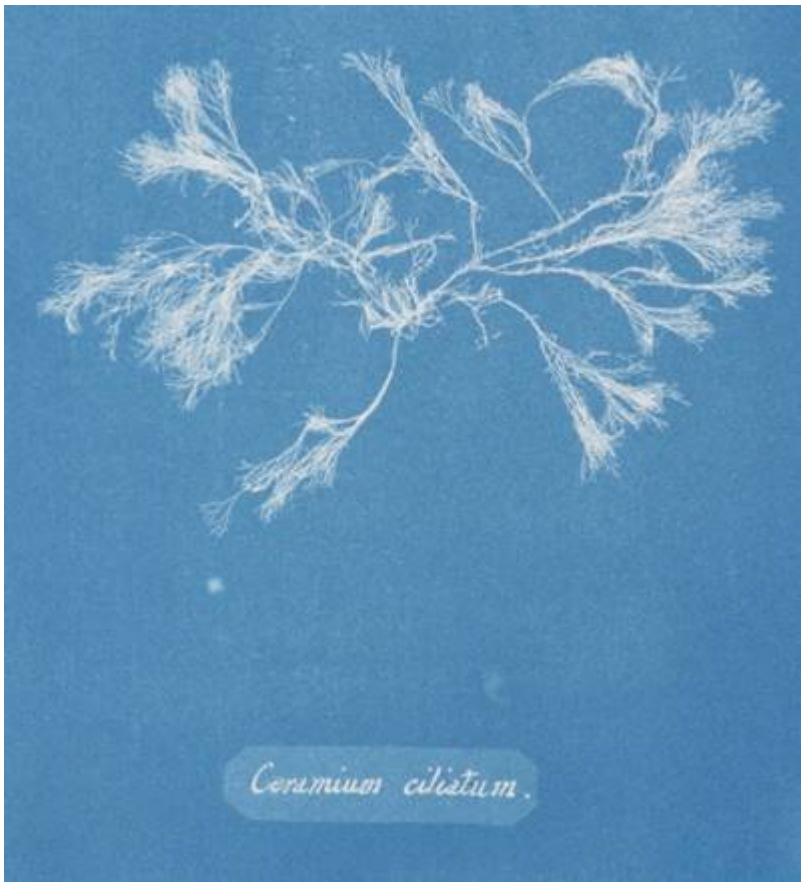

Griffithsia multifida


Griffithsia corallina

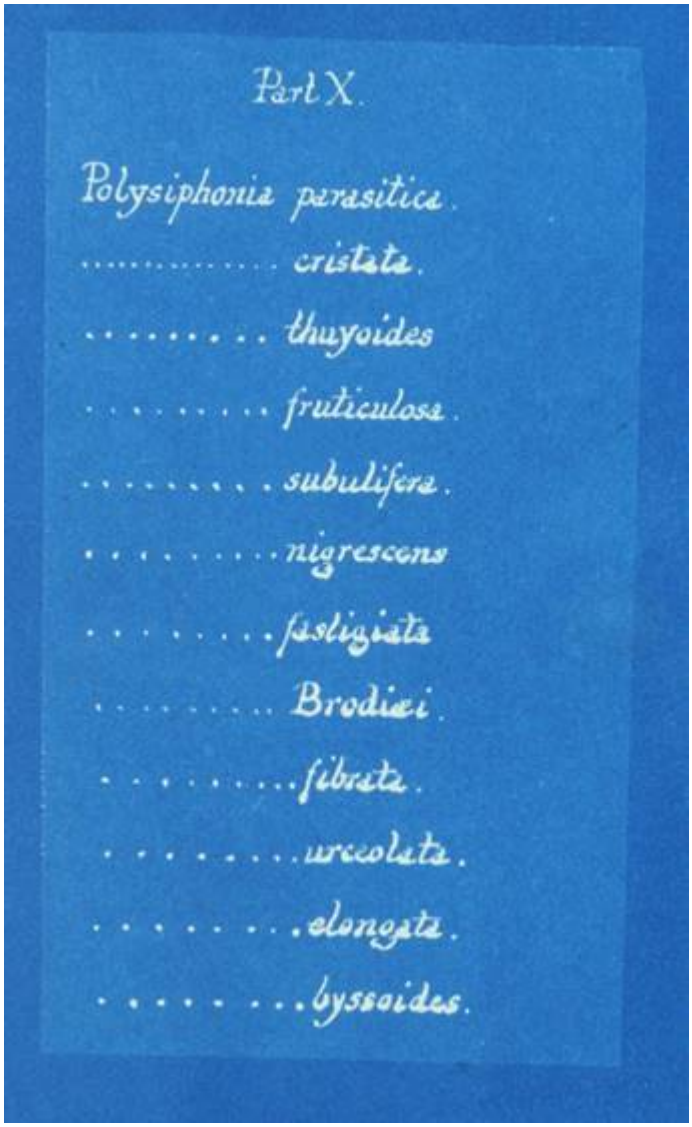

Griffithsia setacea.

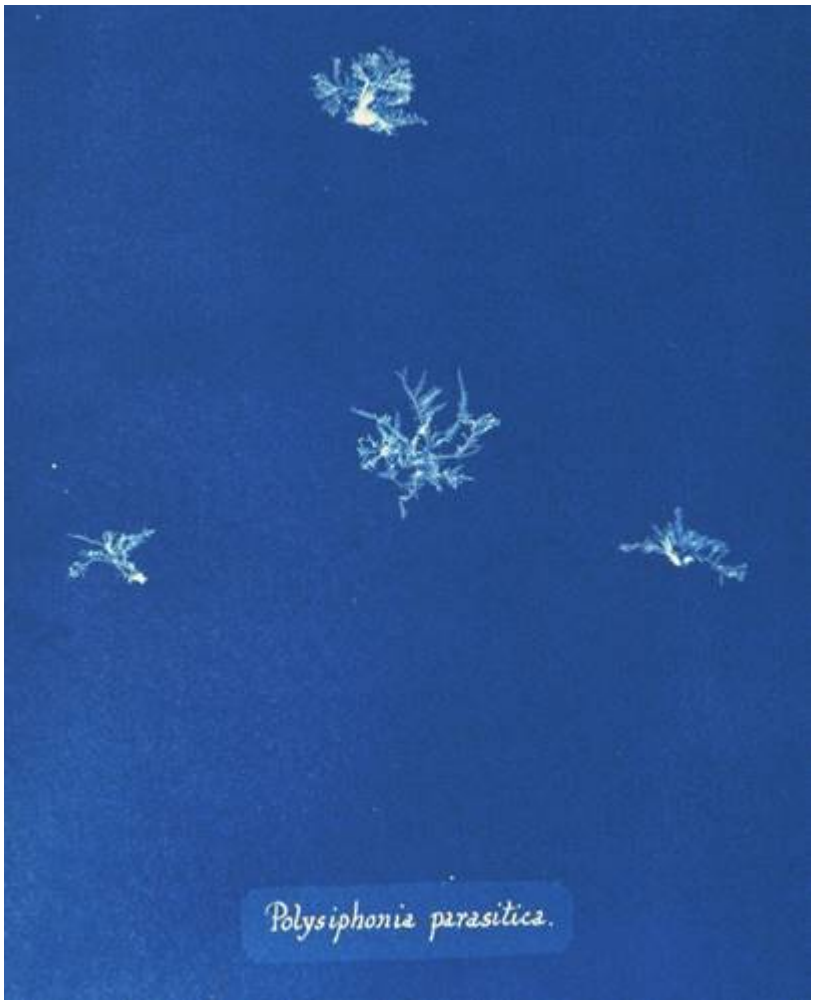

ctamium rubrum

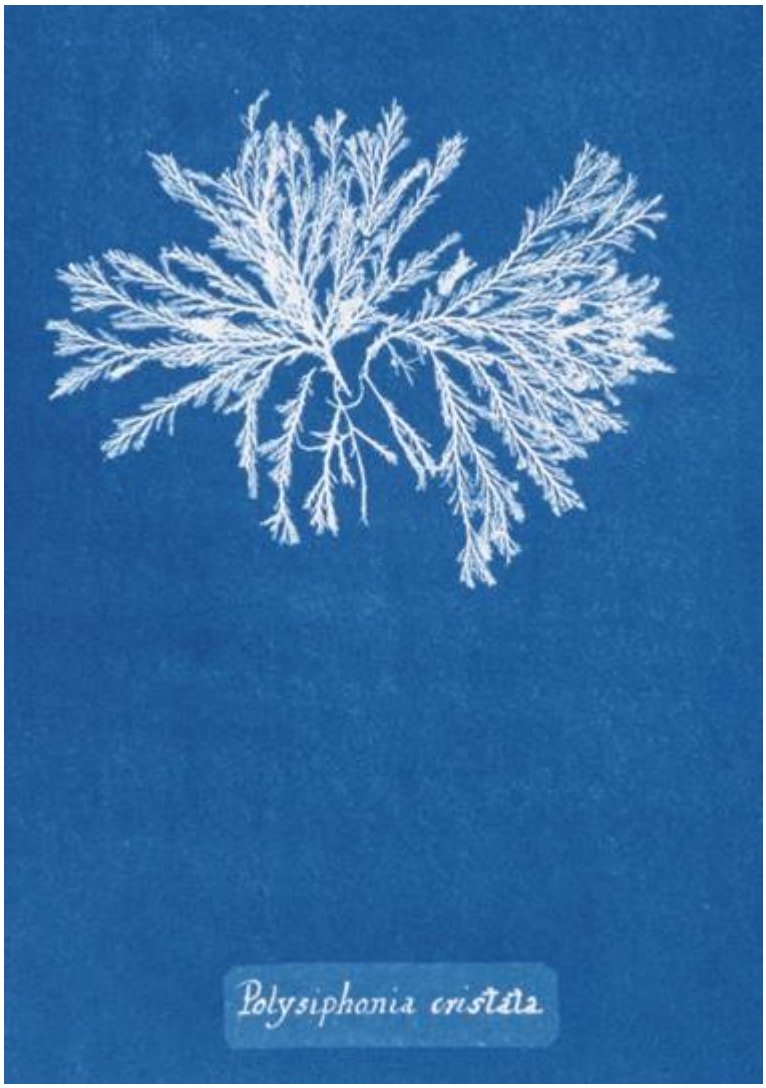

Ceramium diaphanum.

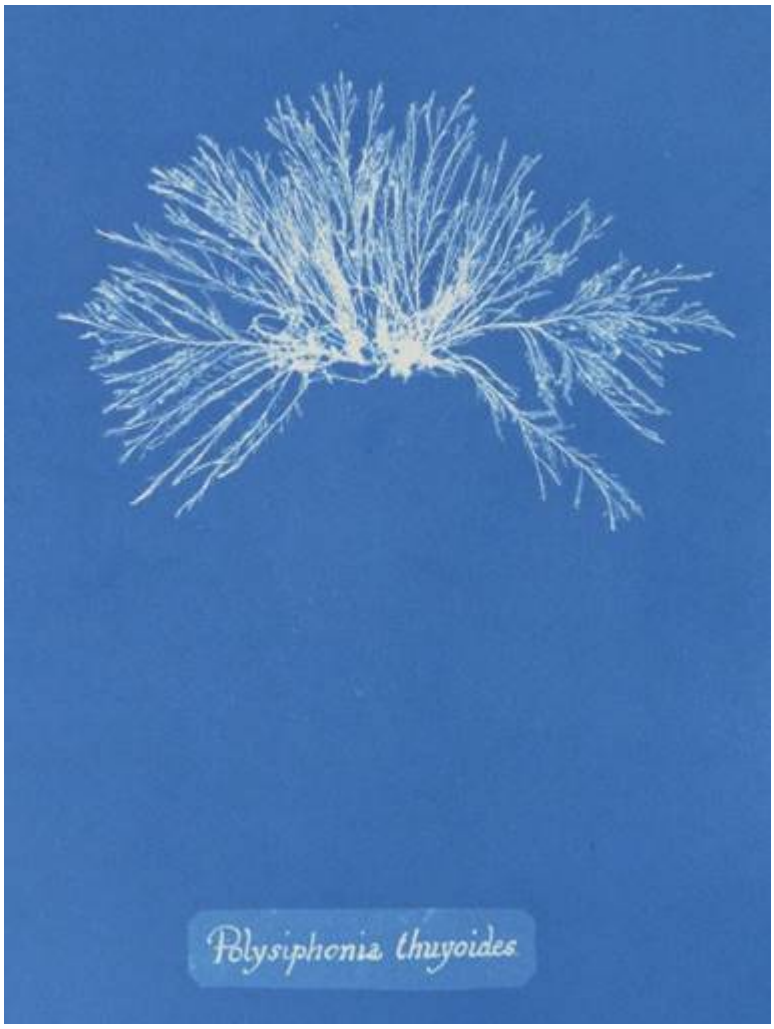

Ceramium ciliatum.

PART X

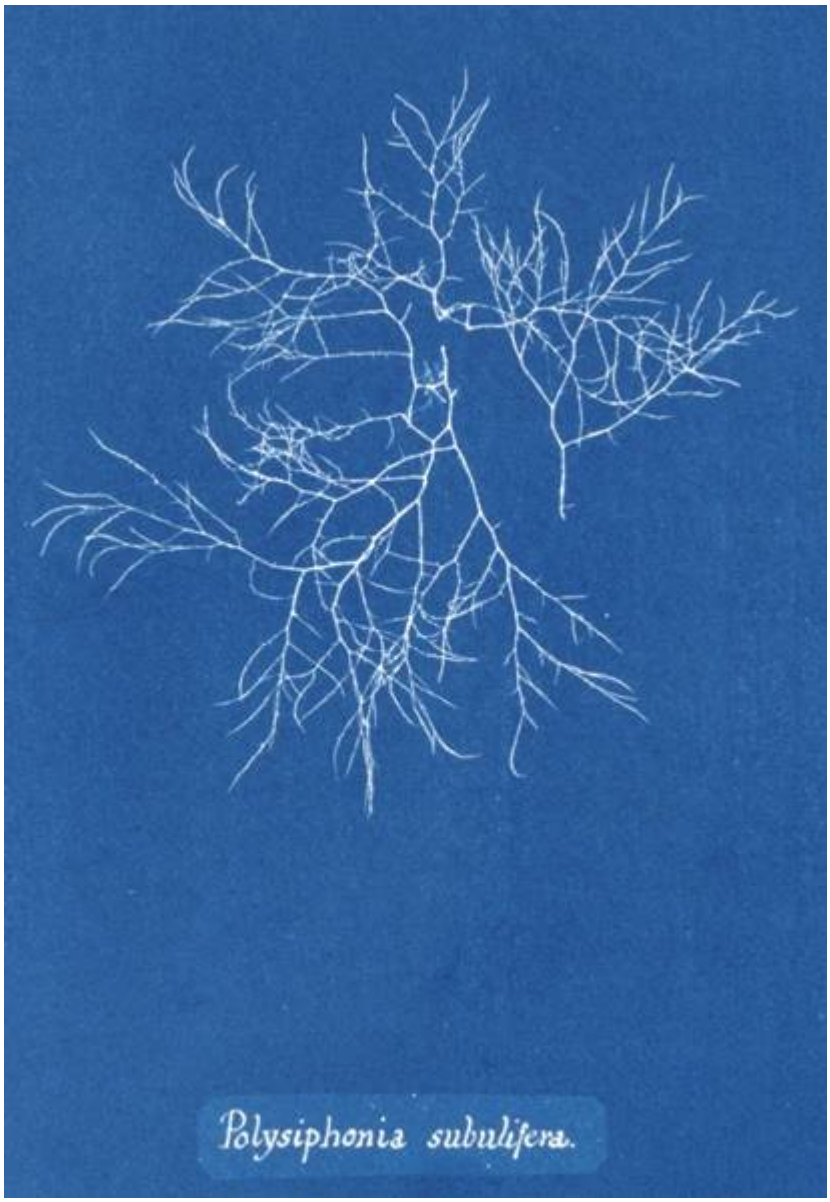

Part X.
Polysiphonia parasitica.
..... cristata.
..... thuyoides
..... fruticulosa.
..... subulifera.
..... nigrescens
..... fastigiata
..... Brodiæi.
..... fibrata.
..... urceolata.
..... elongata.
..... byssoides.


Polysiphonia parasitica.

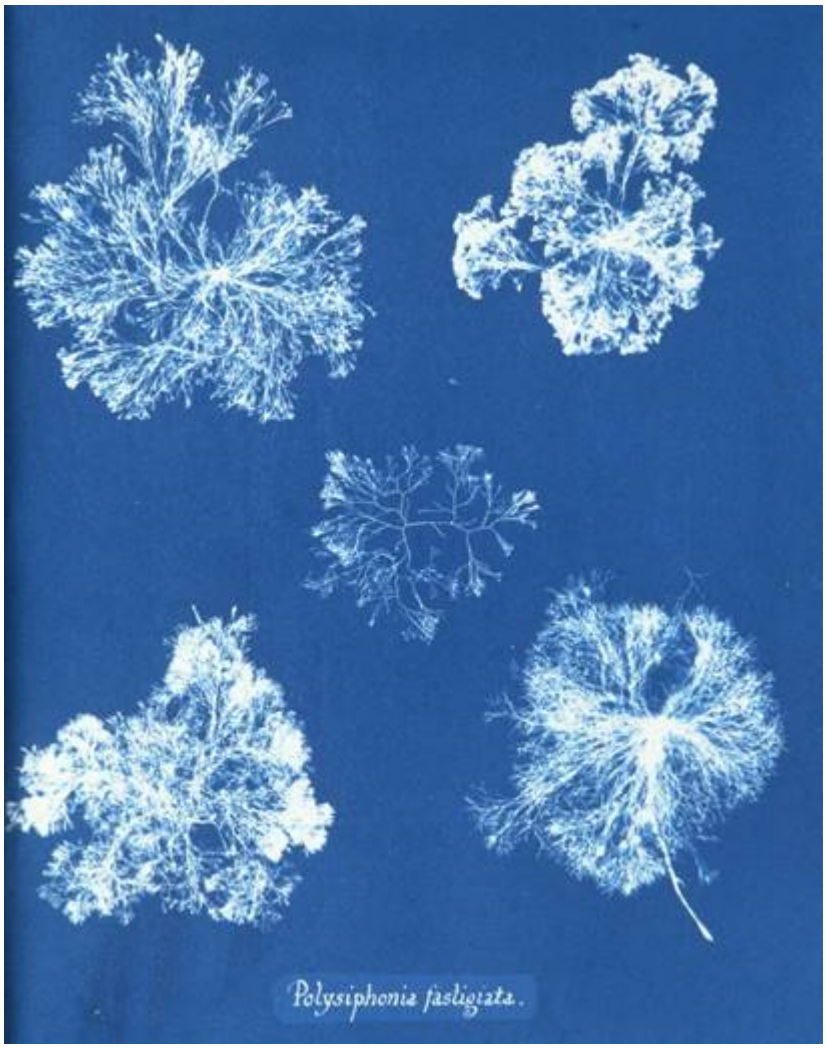

Polysiphonia cristata


Polysiphonia thuyoides


Polysiphonia fruticulosa.


Polysiphonia subulifera.


Polysiphonia nigrescens.


Polysiphonia fasligiata.


Polysiphonia Brodiæi

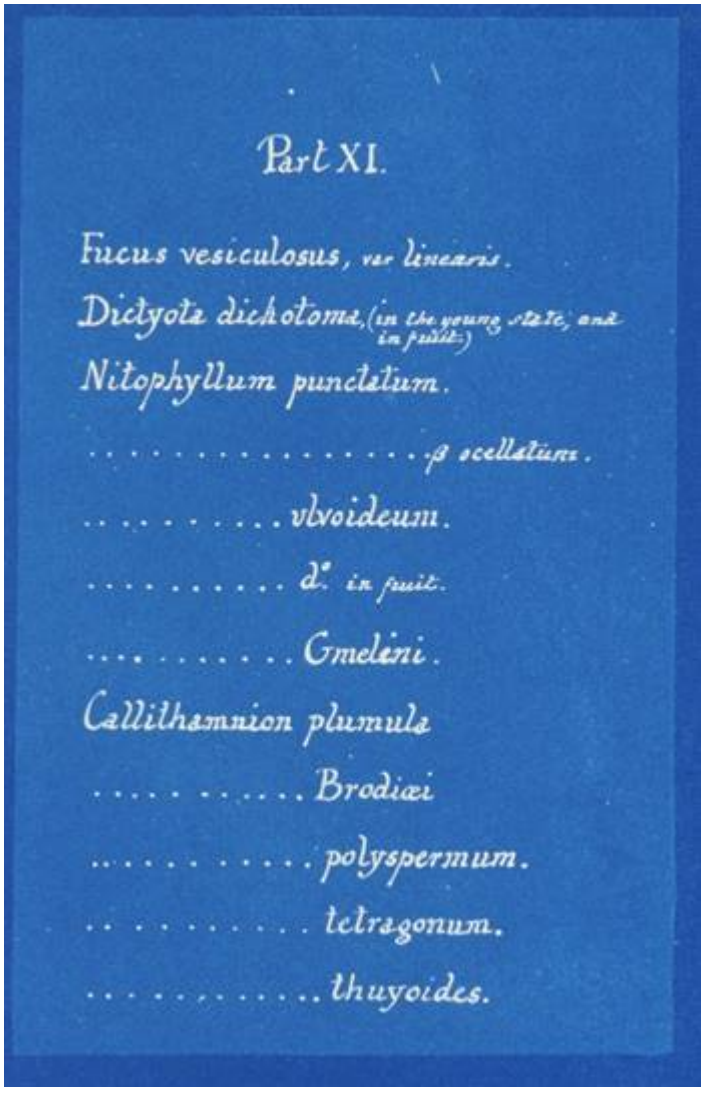

Polysiphonia fibrata.


Polysiphonia urceolata.


Polysiphonia elongata.

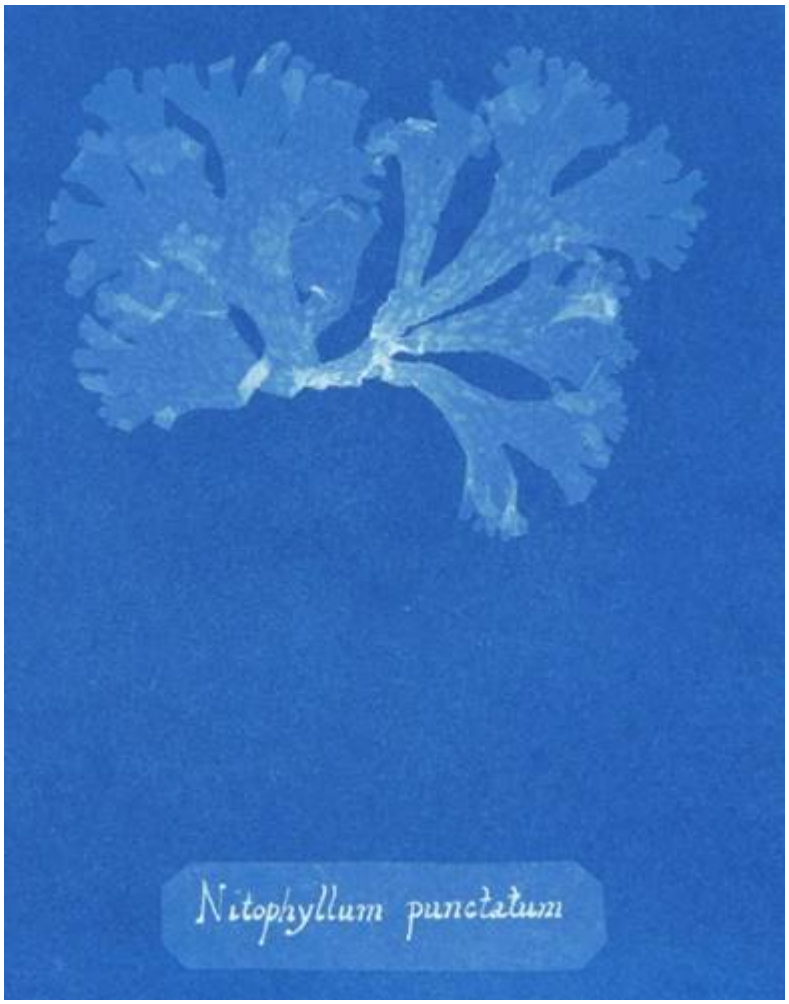

Polysiphonia byssoides.

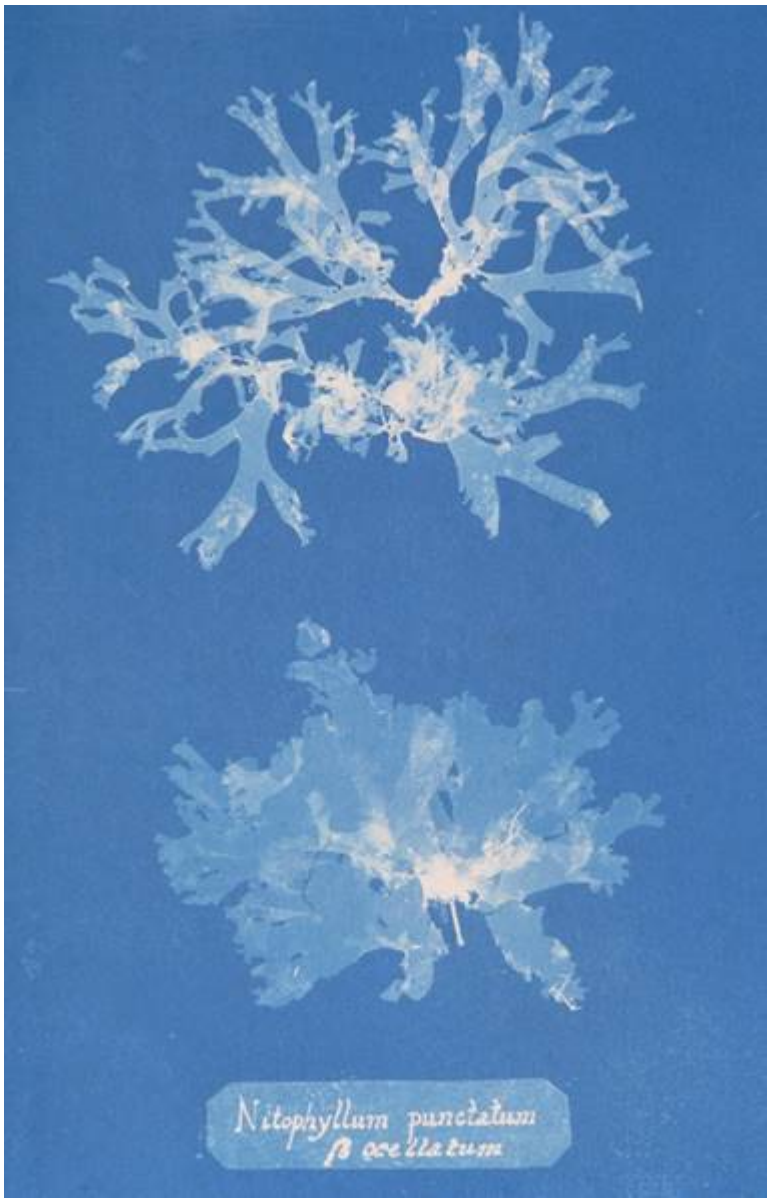
PART XI


Part XI.
Fucus vesiculosus, var linearis.
Dictyota dichotoma, (in the young state, and in fruit.)
Nitophyllum punctatum.
..... β scellatum.
..... ulvoideum.
..... d° in fruit.
..... Gmelini.
Callithamnion plumula
..... Brodiæi
..... polyspermum.
..... tetragonum.
..... thuyoides.


Fucus vesiculosus. var linearis


Dictyota dichotoma
in the young state, &
in fruit.


Nitophyllum punctatum

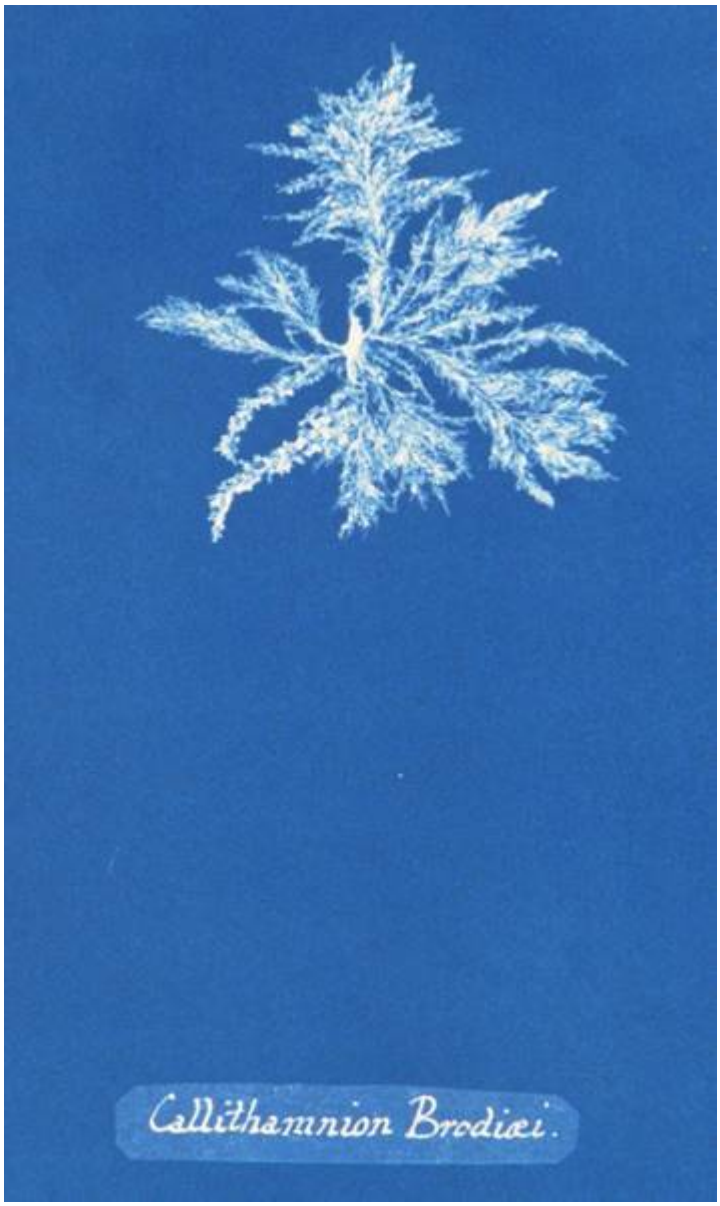

Nitophyllum punctatum
β ocellatum

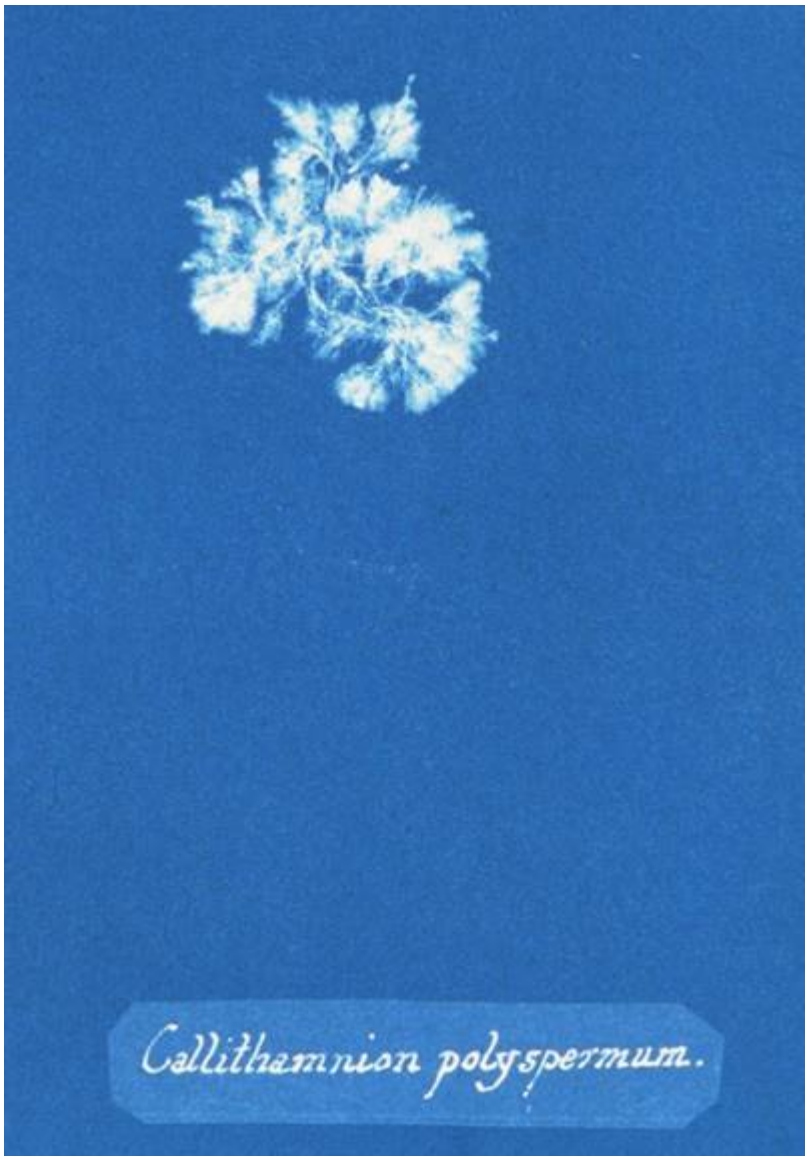

Nitophyllum ulvoideum.


Nitophyllum ulvoideum.
in fruit.


Nitophyllum Gmelini.


Callithamnion plumula.

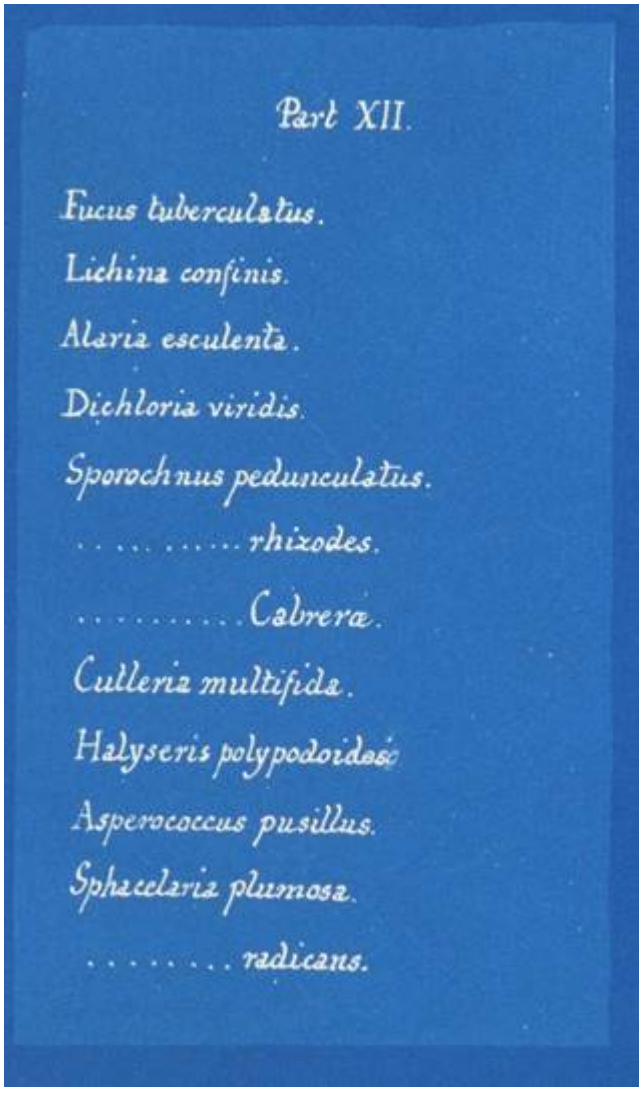

Callithamnion Brodiæi.

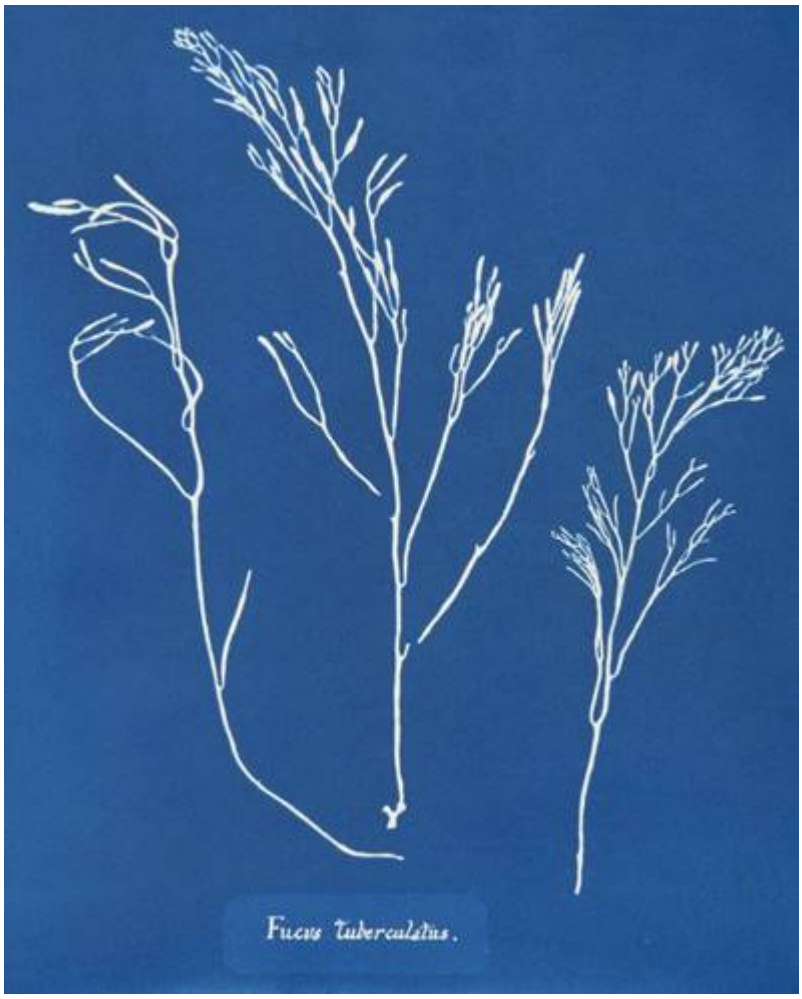

Callithamnion polyspermum.


Callithamnion tetragonum.


Callithamnion thuyoides.

PART XII


Part XII.
Fucus tuberculatus.
Lichina confinis.
Alaria esculenta.
Dichloria viridis.
Sporochnus pedunculatus.
. . . . . rhizodes.
. . . . . Cabrerae.
Culleria multifida.
Halyseris polypodioides
Asperococcus pusillus.
Sphacelaria plumosa.
. . . . . radicans.

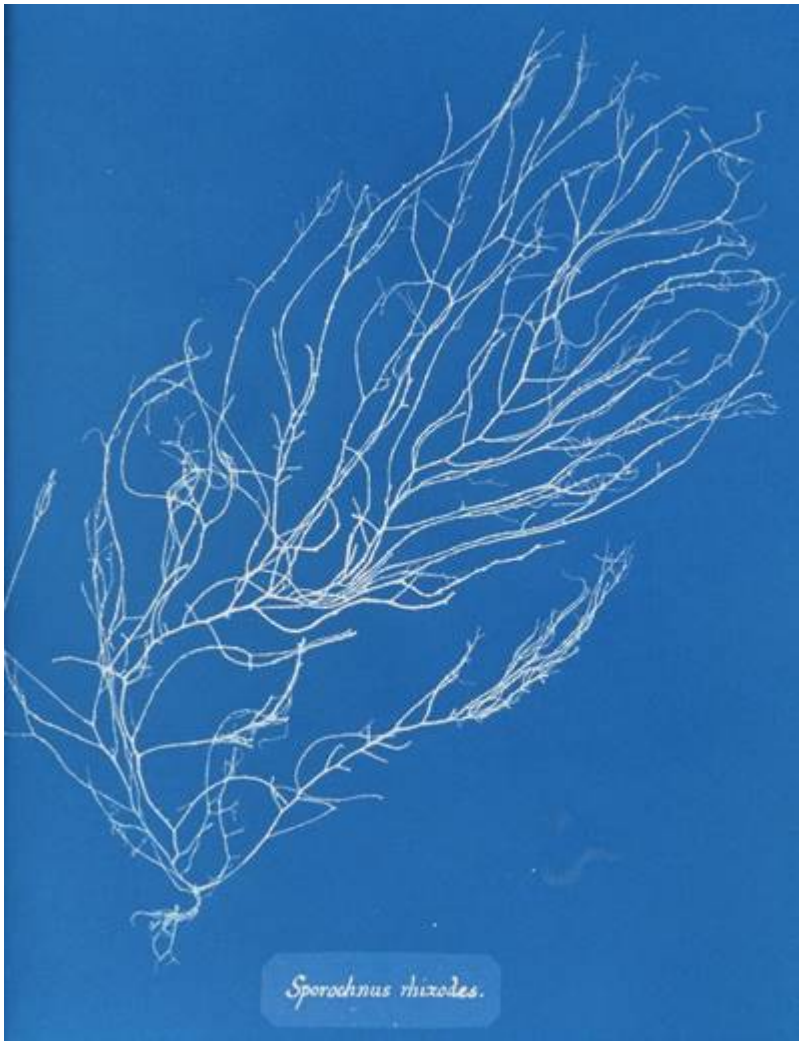

Fucus tuberculatus.

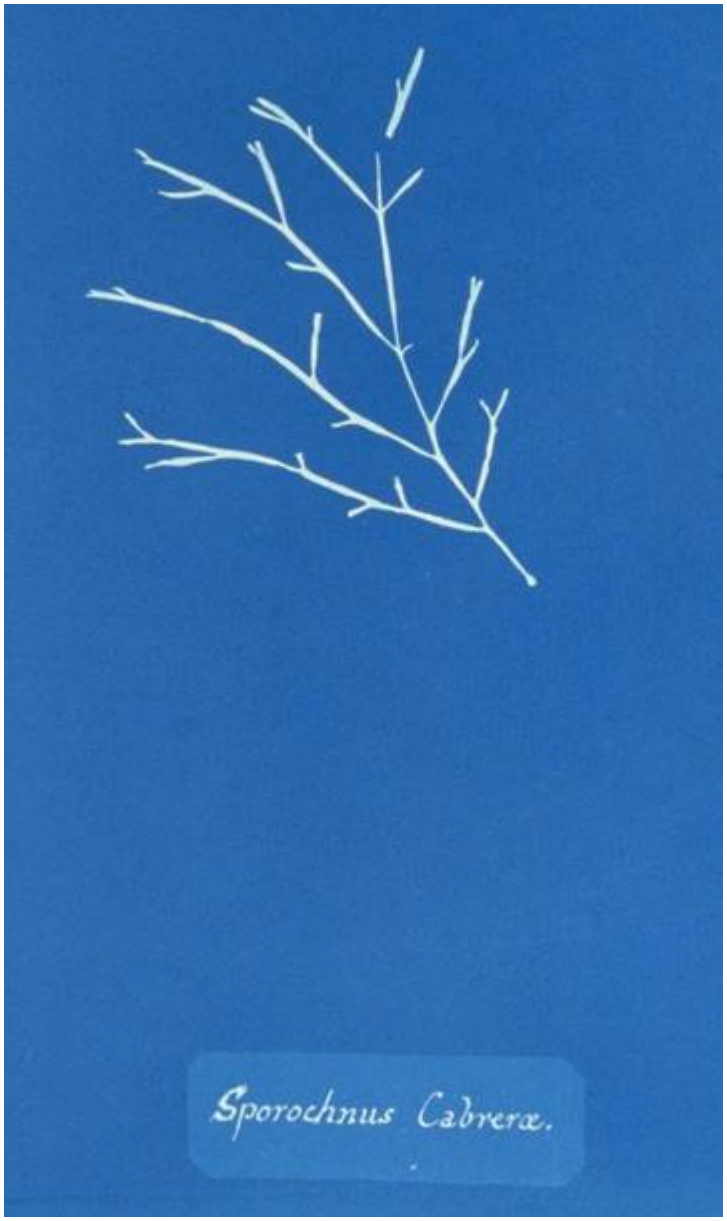

Lichina confinis.

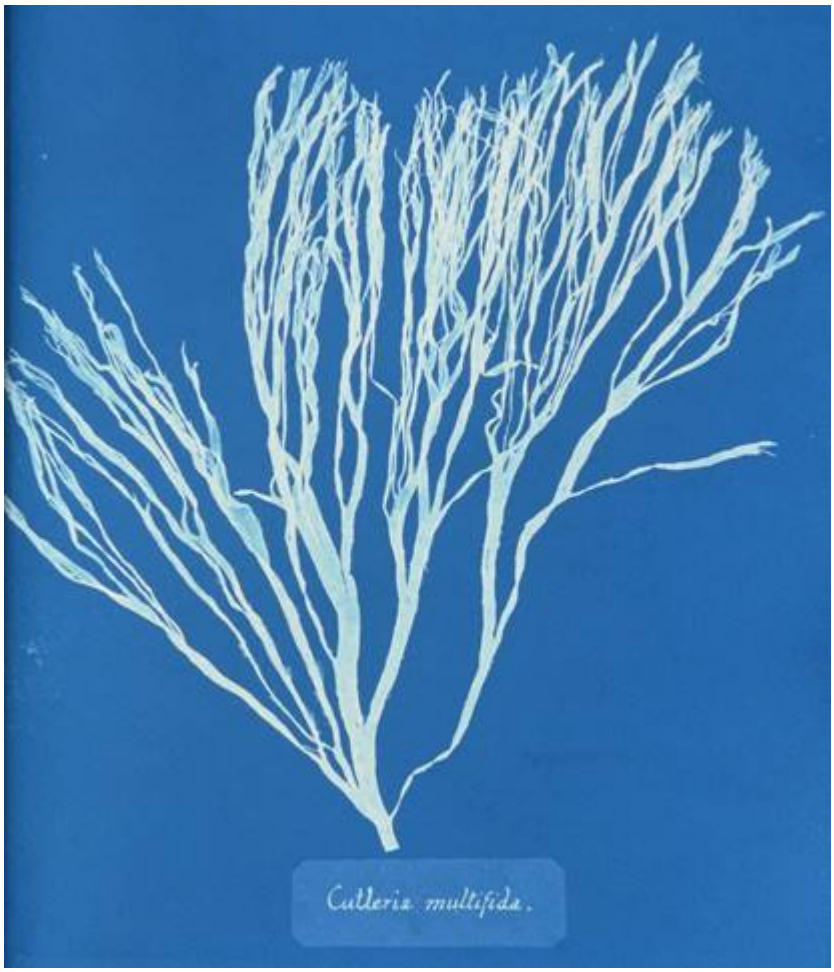

Alaria esculenta.


Dichloria viridis.

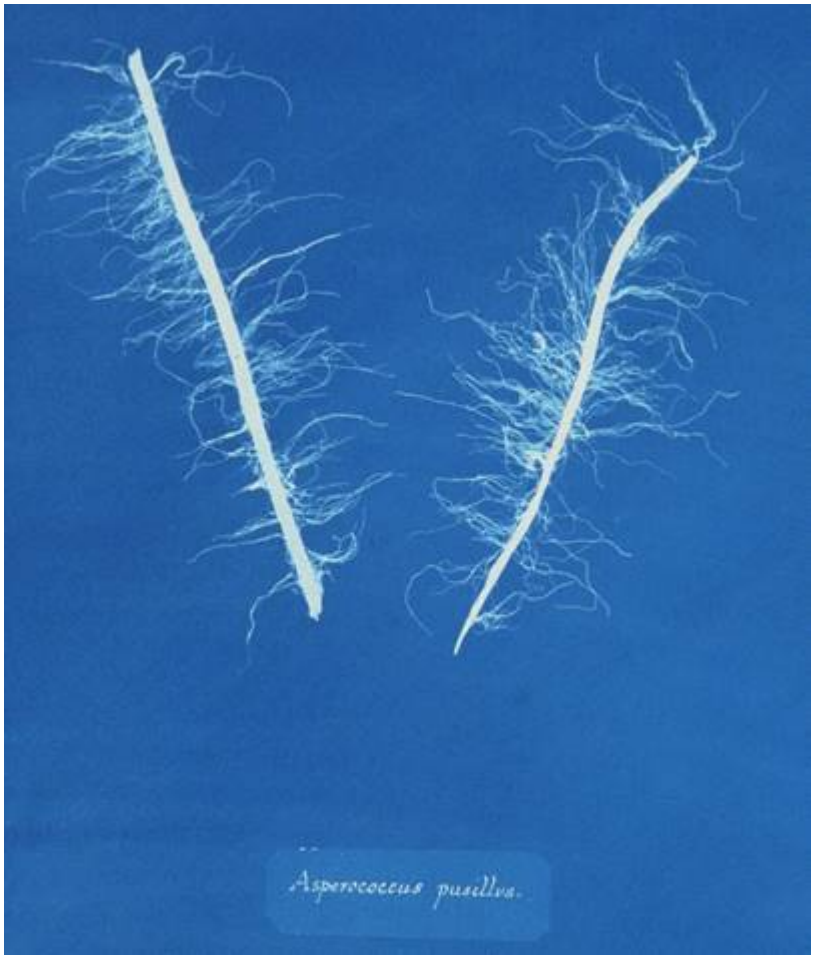

Sporochnus pedunculatus.

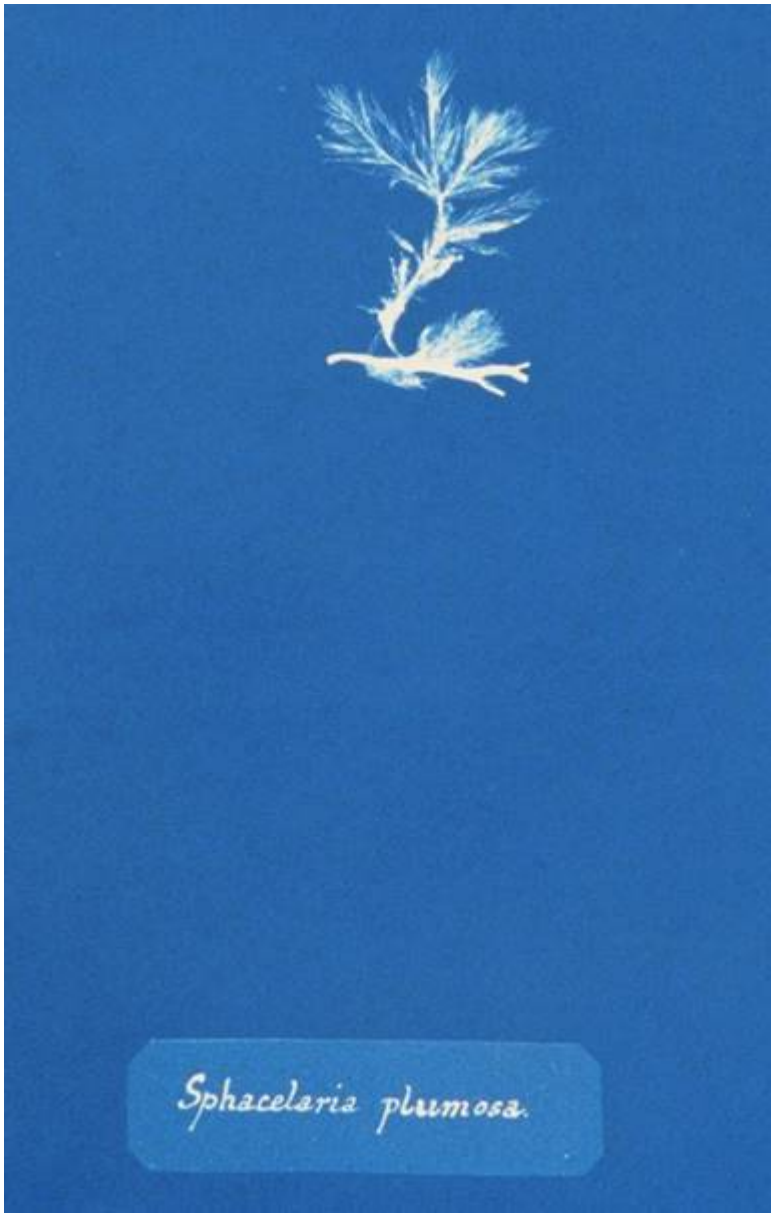

Sporochnus rhizodes.


Sporochnus Cabreræ.


Cutleria multifida.


Halyseris polypodioides.


Asperococcus pusillus.


Sphacelaria plumosa.


Sphaceloria radicans.

SUMMARY

Cyanotypes are amazing works of art, and Anna Atkins was a stunning woman to bring them into book format for the very first time. The natural use of algae was a perfect pairing for this organic method of capturing the sun.

Here's some cinnamon ferns I worked with in my back yard!

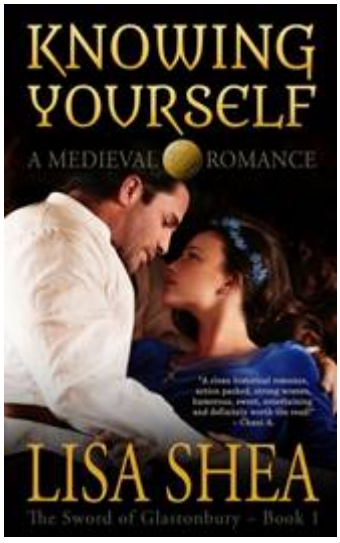
Peruse the cyanotypes regularly to draw inspiration. It's a form of meditation. Go through them and see what catches your eye on each pass. The more you absorb them, the more you'll be inspired in your own work!

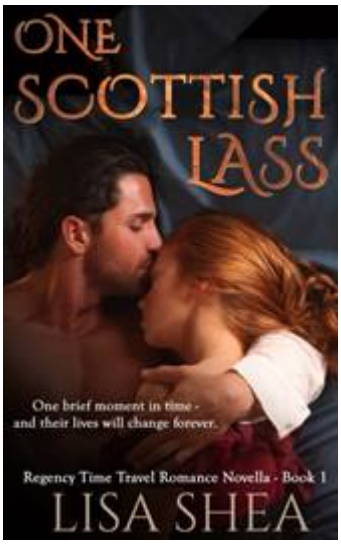
Thank you for reading this *Anna Atkins Biography & Cyanotypes* book! I hope I helped you along your way to a creative new hobby!

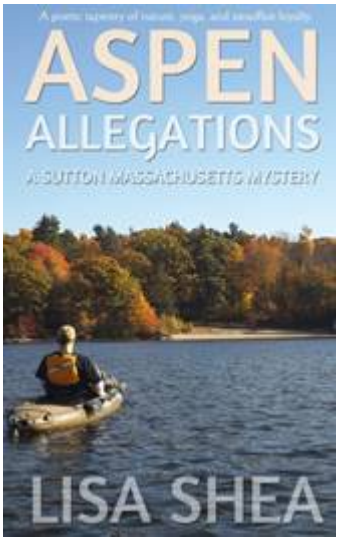
If you enjoyed this book, please leave feedback! All proceeds benefit children's art programs.

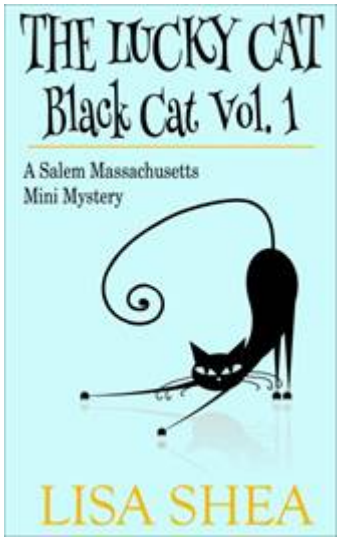
You can also post Goodreads and any other systems you use. Together we can help make a difference!

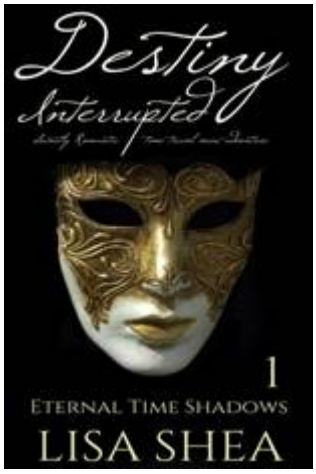
FREE books in my library include:



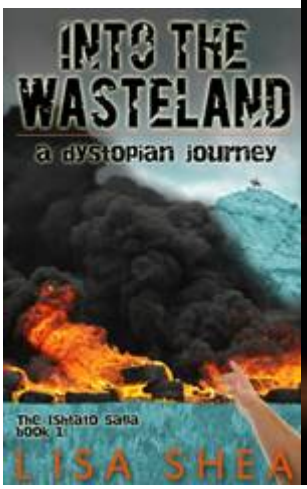


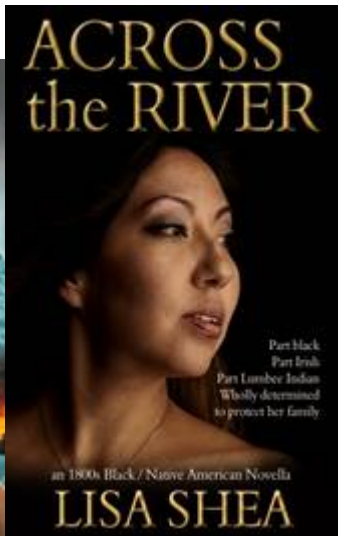


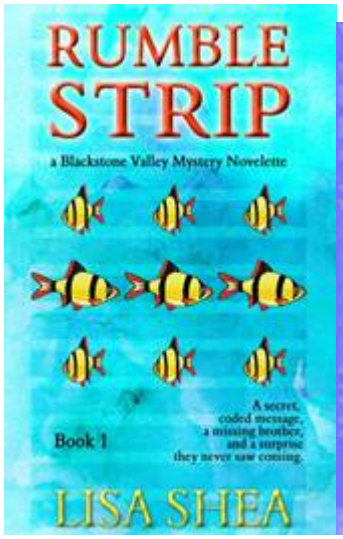


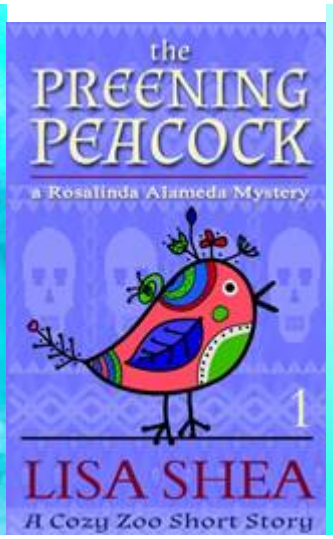



RIVER JORDAN
A JERUSALEM SHORT STORY
book 1
LISA SHEA
The Dove and the Wolf series

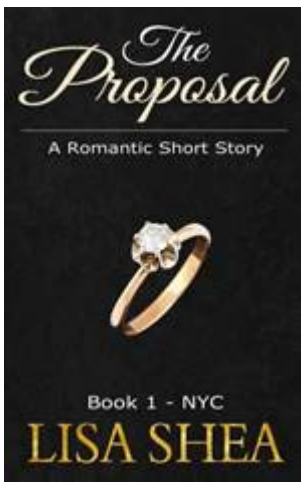

INTO THE WASTELAND
a dystopian journey
The Ishtar Saga
book 1
LISA SHEA

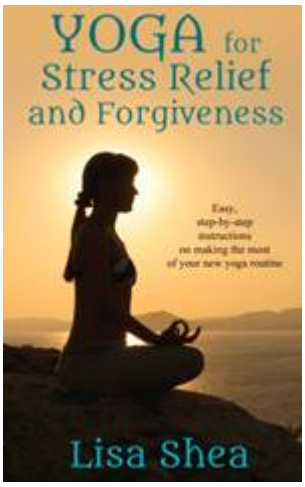

ACROSS the RIVER
Part black
Part Irish
Part Lumbee Indian
Wholly determined
to protect her family
an 1800s Black / Native American Novella
LISA SHEA

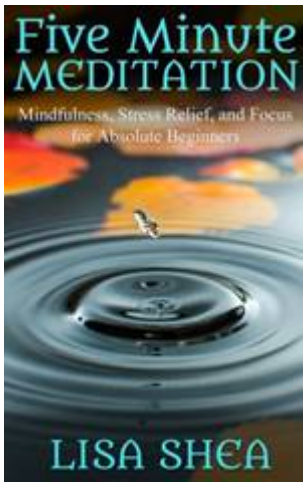

RUMBLE STRIP
a Blackstone Valley Mystery Novelette
Book 1
A secret,
coded message,
a missing brother,
and a surprise
they never saw coming.
LISA SHEA


the PREENING PEACOCK
a Rosalinda Alameda Mystery
1
LISA SHEA
A Cozy Zoo Short Story


SNIFFING OUT a CRIME
Dog Fosterer Museum Mysteries - Volume 1
An Art Detective
Dog Lover's
Short Story
LISA SHEA







If one of these is not free on your system for some strange Amazon reason, all author's proceeds will go to support battered women's shelters.

Be sure to sign up for my free newsletter! You'll get alerts of free books, discounts, and new releases. I run my own newsletter server – nobody else will ever see your email address. I promise!

http://www.lisashea.com/lisabase/subscribe.html

DEDICATION

To the Blackstone Valley Art Association who encourages and inspires me daily. Especially to Bob Evans who encouraged me by sharing his own cyanotypes!

To my boyfriend, who encourages me in all of my dreams.

Most of all, to my loyal fans on GoodReads, Facebook, Twitter, Google+, and other systems who encourage me. Thank you so much for your enthusiasm!

ABOUT THE AUTHOR

Lisa Shea began her career as a programmer for a number of high-challenge biotech and software companies. After years in the high-pressure industry she decided she wanted to use her skills to help others. She wanted to create a learning environment where those who often have few outlets – stay-at-home moms, those caring for elderly parents, or parents of children with special needs – could reach their dreams and goals.

Through her website BellaOnline.com Lisa strives every day to help every editor and visitor achieve whatever they set out to do.

Please visit BellaOnline.com and see what sites we have open. If one is of interest to you, we'd love to help with training, support, and an encouraging community, so you can reach your dreams!

Please visit the following pages for news about free books, discounted releases, and new launches. Feel free to post questions there – I strive to answer within a day!

Facebook:
https://www.facebook.com/LisaSheaAuthor

Twitter:
https://twitter.com/LisaSheaAuthor

Google+:
https://plus.google.com/+LisaSheaAuthor/posts

GoodReads:
https://www.goodreads.com/lisashea/

Blog:
http://www.lisashea.com/lisabase/blog/

Newsletter:
http://www.lisashea.com/lisabase/subscribe.html

Share the news – we all want to enjoy interesting novels!

Table of Contents