

H J X
Newburyport Nov 8, 1896

Friend Davenport,

I sat down
a few minutes ago to reread your
article on the hybrid fern — which
by the way is a very good one —
when I had a new thought occur
to me which I am going to give
you while it is fresh.

Meehan, remarks in Vol
1st of Series II of his "Flowers and
Ferns of the U.S." ~~that~~ in connec-
tion with his illustration of
A. ebenoides (I quote from memory)
that attempts have been made
to hybridize ferns by sowing
the spores very thick so that the
prothallium will be pushed

up edgeways with the idea of causing the antheridia of one prothallium to enter the archegonia of another. But he remarks that not much success has been attained in this way and says something about there not being one chance in a million of this occurrence taking place.

~~There~~ "The minute anatomy has been carefully studied in only a few of our native ferns and fewer still have been watched through the phases of their life history" (Underwood's Our Native Ferns, page 74)

"In some species notably the Ostrich Fern the two kinds of sexual organs are produced on separate prothallia so that the plant becomes dioecious" (P. 20

But how if either *A. cristatum*
or *A. marginale* is dioecious
Who has ever investigated this

If any one it is probably Douglass
Campbell. I have not access
to his book on the Development
of Ferns and Mosses but it
is quite evident that if one or
either of the parent ferns of
our species produces dioecious
prothallia that then this case
of ours become entirely clear
for there is evidently no reason
why the antheridia of one sort
of prothallium should not enter
the archegonia of another sort
and as the ferns are very near
allies they ~~are~~ would probably
fertilize it this occurrence ta-
king place just where we
should expect that is at the
foot of dactylitis where the

two ferns meet. At any rate that is the way I am betting until I find out more about it. If no one has happened to think that the ~~question~~ fact of dioecy has a bearing on the hybridity of ferns I don't know but what I shall investigate it myself.

Respectfully

Raynal Dodge



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