

THE YOUTH'S PRECEPTOR.

Devoted to General Information, Tales, Sketches, Amusements, Poetry, Music, Anecdotes, &c.

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The Youth's Preceptor.

We have to apologise to our patrons for irregularities and delay in the publication of The Youth's Preceptor. The promising reception which this paper met with in the earlier stages of its existence, induced us to hope that ere this period the subscription list would not only be sufficiently increased to sustain it without loss, but extensive enough to enable us to introduce all the improvements contemplated at the recommencement of its publication. The number of subscribers, however, is not adequate to support its continuation at the price for which it is now furnished—and unless a further increase of several hundred be made to the list, its publication must be discontinued, and the balance returned to those subscribers who have paid in advance.

The efforts which have been made, in the numbers hitherto published, to render this paper acceptable and beneficial to those for whose use it is intended, were repeatedly encouraged by cordial and voluntary expressions of approbation from many of the most respectable and intelligent individuals residing in various parts of the Province; and by an anxious desire for its success manifested on the part of our patrons generally. With such assurances we may still hope that the circulation of the Preceptor will be more extensive, and its character more generally appreciated, as each succeeding number appears; that the wishes of its supporters will be eventually realized, and its influence rendered effective in the cause in which it is intended to co-operate. Meanwhile the succeeding numbers will be issued at convenient intervals until the public estimation of its character can be more definitely ascertained.

When the vast patronage bestowed upon similar periodicals in the United States is considered—the circulation of which is estimated by thousands and tens of thousands, while we must limit our expectations to tens and hundreds—no reasonable objections can be made to the price charged for The Youth's Preceptor, which is comparatively lower than that of any other publication.

The general impression is that such a periodical is required for the youth of this Province; and if suitably supported may be made available in the cause of education, intelligence and sound morality. To sustain it at the low price for which it is now published, the Preceptor would require the patronage of from 1500 to 2000 subscribers—allowing 100 from each of 17 Counties, and 300 from the City and County of Halifax. According to the average population of each county, the above estimate is far below what might be expected; and if the benefits which such a publication is adapted to confer on the rising generation, were more generally appreciated by School Commissioners, Teachers and Parents, THE YOUTH'S PRECEPTOR would soon be extensively and permanently established.

We submit the above for the consideration of the public generally; and if its continuation is desired, the regular publication of this paper will be resumed agreeably to the terms of Pros-

pects, whenever a sufficient patronage is guaranteed. As complete sets of the back numbers remain on hand, new subscribers can be furnished with copies from the commencement of the present volume.

AGRICULTURE. (SECOND ARTICLE.)

Since our last Article on Agriculture we see that Judge Haliburton, at the anniversary dinner of the Royal Agricultural Society of England, characterised the employment as the *most simple, the most natural, the most Ancient, and the most honorable*. We are gratified by the support of his opinion, but we cannot concede to that of its being the *most simple*. We admit that the mere tilling of the ground, whether by the spade or the plough, is simple enough; but it is a very gross mistake to suppose that in these mechanical operations the art of agriculture entirely consists. However, simple as they may be, they need to be learned: and we confess ourselves quite unable to hold the plough or drive the harrow. It is in the scientific department that we shall attempt to instruct our young readers, with an outline of the principles, which we condense, in as plain and simple a manner as possible, from what has been written by some of the most eminent men who have maturely studied the subject.

In the first place we invite attention to the nourishment which plants derive from the air. Every one must have observed not only small plants growing on stones, but even bushes and trees amongst them, in places where little or really no soil exists. These plants cannot derive through their roots the substances which support them and promote their growth. It must therefore come from another source, and it has since been discovered that it is from the air.

The air is composed of two gases, called Oxygen and Nitrogen. These are invisible, tasteless and inodorous; but although we cannot see them or feel them—except when in a current which we call wind—they are as truly material as the water, which we can see, feel, and taste: and which is itself composed of two gases,

each invisible and tasteless by themselves when separated. The proportions in the air are four fifths of nitrogen and one fifth of oxygen; but there are other substances mixed with it—chiefly water in a state of vapor, and Carbonic Acid—which, although a gas, is composed of Carbon—of which coal and charcoal consist, with oxygen.

Now, wood, or woody matter, consists properly of only Carbon, Hydrogen, and Oxygen. And the two latter, when combined, form water. In whatever state these substances may be, and in whatever condition, the plants have the power of separating them from each other, and appropriating them in the due proportions, to suit their own support and health.

We shall now recapitulate what we have in the air.

Nitrogen
Oxygen
Hydrogen } invisible gases,

Carbon a solid substance in itself, when uncombined with another.

Our next essay on this subject will be on the sources from which the Carbon is derived, and the manner that it is absorbed by the plant. In the meantime let us remember that woody fibre, or Lignine, as it is called in Science, an important part of every plant, is composed of charcoal and the elements that form water.

Natural History.

INTRODUCTION TO THE STUDY OF QUADRUPEDS, OR OF THE CLASS MAMMALIA, ON SCIENTIFIC PRINCIPLES. ADAPTED FOR YOUTH.

ORDER III.—CARNIVORA.

(Continued from No 14, page 100.)

Having spoken thus generally of the *Cheiroptera*, or family of Bats, a family throughout which there prevails a marked uniformity, notwithstanding those differences on which minor divisions are instituted, we shall proceed to introduce the next family to the notice of our readers. It is termed *Insectivora*, or the Insectivorous Family; because it comprehends those animals whose food is especially insects, or at least those whose constitution indicates that such form their principal diet, although not perhaps exclusively; since smaller animals and