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VIOLATION OF NEWTON'S LAW OF GRAVITATION: GRAVITATIONAL FORCE INCREASES DUE TO MOTION OF WATER

MORE B.M.*

Department of Engineering Physics, Brahmadevdada Mane Institute of Technology, Belati, Solapur- 413002, MS, India.
*Corresponding Author: Email- babasahebmore@gmail.com

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Abstract- Newton used the motion to explain the origin of various forces acting on bodies. For gravity he could not identify the motion that produces the force of gravity. The cause of gravity is still under investigation and, yet there is no definite answer.

The unusual growth of the tree with some of the twigs bending downward is because of the extra gravitational force acting on these twigs. This extra gravitational force is because of the presence of underground water stream at that place. Comparative diameter of unusual growth twigs with usual growth twigs decreased, while that of its length increased. The growth index ratio calculated is greater than one of these trees. This increase in gravitational force is because of the motion of the underground water stream. Here I exploit the increase in gravitational force is because of the motion of underground water

Keywords- Gravitation, Motion of Water, Tree, Bending of Twigs

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Introduction

Newton's description of gravity is satisfactory for many practical purposes and provides a correct description of the earth-sun [1]. The Physicists have not yet resolved the relation between the gravitational force and other known fundamental forces. Even Newton's theories and his mathematical formula did not and do not explain the equality of the behavior of various masses under the influence of gravity [1]. Newton was uncomfortable with force at a distance and he could not identify the motion that produces the force of gravity [1].

The trees are nearly symmetrical in shapes but sometimes they are irregular. In case of irregular shapes, some of the twigs of these trees are bending downwards in a straight line [2-4]. This observation has forced me to the proposal for bending of twigs is owing to the presence of extra gravitational force. This extra gravitational force is attributable to the presence of underground water stream In [2-4]. This publication I propose the body of research that, suggests the cause of increased gravitational force is the motion of underground water and defined new term Growth Index Ratio (GIR) with it's physical significance.

Materials and Methods

Growth of Trees

The buds elongate the branches and widen the crown (branches and leaves). The particular shape of the crown and the size of the trunk in an individual tree is a different asset of the tree [2-4]. The neem tree in [Fig-1] gives usual growth of trees and the crown is nearly symmetrical in shape. The branches grow towards the light. The crown of some trees is asymmetric. You may call them unusual growth of which some branches are bending downwards as viewed in [Fig-2].

Fig. 1- Photograph of Neem tree with usual growth of which twigs grown radial towards the light.

Results and Discussion

The Neem tree in [Fig-2a] shows, unusual growth with their twigs are bending downward in a plane. The gravitational force is acting on whole branches of tree. The growth depends on sunlight. In trees, the trunk brings the tree up into the light filled environment. The tree genetic leaning is to capture as much light as possible, which increase it's capacity to do photosynthesis and grow. Since every tree has this leaning and creates growth competition with its neighbor to increase light uptake [2-4].

Additional Gravitational Force on Twigs of Tree

The gravitational force, which is acting on all the branches of the tree, is against the growth of trees. The neem tree in [Fig-2a], shows unusual growth with their twigs bent downward in a plane as drawn in [Fig-2b]. The twigs which bent downward direction should have some extra force acting on it. This extra force is because of the presence of underground water stream below these twigs [3,4]. Since extra force acting on unusual growth twigs, they stretched in a downward direction. The effect of this force gives an increase in length and decrease in diameter of twigs [3,4]. We see the twigs of trees on the bank of the river or nearby well bent in a downward direction. This supports, bending twigs of trees is because of the presence of water. Therefore, high priority given to explore the relation of unusual growth and motion of the underground water stream. I propose the new terms as Growth Index (GI) and Growth Index Ratio (GIR) as given.

Fig. 2- Photograph of tree with unusual growth of which twigs bent downward. **2a-** Neem tree with unusual growth and **2b-** a plane drawn parallel to bent twigs shown by red color.

Growth Index (GI)

Growth Index is the ratio of the length of twig of a tree to the diameter of the twig, at the point from the length measured.

Growth Index of Unusual Growth (GI) $_{unusual}$

Growth Index of unusual growth is the ratio of the length of unusual growth twig of the tree to the diameter of the unusual growth twig, at the point from the length measured.

Growth Index of the Usual Growth (GI) $_{usual}$

Growth Index of usual growth is the ratio of the length of usual growth twig of the tree to the diameter of the usual growth twig, at the point from the length measured.

Growth Index Ratio (GIR)

Growth Index Ratio (GIR) is the ratio of growth index of unusual growth of the tree to the growth index of the usual growth of the same tree.

$$GIR = \frac{GI(unusual)}{GI(usual)} \quad (1)$$

Physical Significance of Growth Index Ratio (GIR)

In [Eq-1], if GIR ≤ 1, then either usual growth and unusual growth having same growth index or unusual growth index less than usual growth index, means no extra gravitational force is acting on the twigs of unusual growth and no possibility of presence of underground water stream.

If GIR > 1, then, in unusual growth the length of twig increased while it's diameter decreased, means GI $_{unusual}$ > GI $_{usual}$ and the extra gravitational force is acting on the twigs with unusual growth, which gives the presence of underground water stream. The Growth Index Ratio (GIR), therefore, can used in identifying the underground water stream.

Identification of Underground Water Stream

A plane drawn parallel to the twigs of unusual growth and the intersection of this plane with ground surface gives the line along which underground water stream present [4]. The [Fig-3a] shows photograph of the Neem tree with a plane, drawn parallel to unusual growth twigs, intersecting to ground surface. The [Fig-3b] shows the photograph of drilled bore well at the intersecting point. The [Table-1] gives various parameters for different trees under study with usual growth and unusual growth.

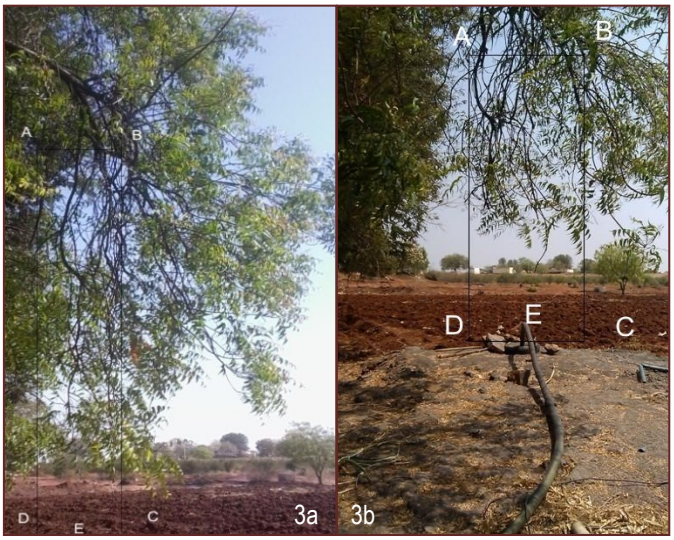

Fig. 3- Photograph of neem tree showing twigs bending downward **3a-** Bore-well point 'E' identified by drawing ABCD plane, parallel to twigs bent downward and **3b-** a bore well drilled at the 'E' point giving water source available at the depth of 75 meters.

Table 1- The usual growth and unusual growth data of twigs various trees with its GIR and depth at which stream found

Tree	Length (cm)		Diameter (cm)		Growth Index		GIR	Depth of Stream (m)
	usual	unusual	usual	unusual	usual	unusual		
Tamarind	74	173	1.18	0.98	62.71	176.5	2.82	165
Neem-1	63	93	1.17	0.97	53.84	95.87	1.78	75
Neem-2	54	105	1.25	1.14	43.2	92.1	2.13	84
Neem-3	134	164	1.02	0.78	131.4	210.3	1.6	33
Neem-4	57	103	0.98	0.78	58.16	132.1	2.27	138

cm : Centimeter; m: Meter

Conclusion

This study clearly shows that, the tree growth is always towards light with branches growing radially from the trunk. Some of the twigs having an unusual growth which bent downward caused by extra gravitational force acting on these twigs. In this case growth index ratio (GIR) is greater than one, which proves that extra gravitational force acting on these twigs. This increases the force on twigs of unusual growth, which is a violation of Newton's law of gravitation. The extra gravitational force is a effect of the motion of water, therefore, Newton's law of gravitation could changed, as 70% of the surface covered earth's with water. This will bring revolution in fundamental laws of gravity.

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Conflict of Interest : None declared.

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