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CHAPTER I.

"It was a happy day that people threw off the straight-jacket of logic and the burdensome fetters of strict method, and mounting the light-caparisoned steed of philosophic science, soared into the empyrean, high above the laborious path of ordinary mortals. One may not take offense if even the most sedate citizen, for the sake of a change, occasionally kicks over the traces, provided only that he returns in due time to his wonted course. And now in the domain of Biology, one is led to think that the time has at length arrived for putting an end to mad masquerade pranks and for returning without reserve to serious and sober work, to find satisfaction therein." With these words did the illustrious Wigand, twenty-five years ago, conclude the preface to the third volume of his large classical work against Darwinism. True, he did not at that time believe that the mad campaign of Darwinism had already ended to its own detriment, but he always predicted with the greatest confidence that the struggle would soon terminate in victory for the anti-Darwinian camp. When Wigand closed his eyes in death in 1896, he was able to bear with him the consciousness that the era of Darwinism was approaching its end, and that he had been in the right.

Today, at the dawn of the new century, nothing is more certain than that Darwinism has lost its prestige among men of science. It has seen its day and will soon be reckoned a thing of the past. A few decades hence when people will look back upon the history of the doctrine of Descent, they will confess that the years between 1860 and 1880 were in many respects a time of carnival; and the enthusiasm which at that time took possession of the devotees of natural science will appear to them as the excitement attending some mad revel.

A justification of our hope that Wigand's warning prediction will finally be fulfilled is to be found in the fact that today the younger generation of naturalists is departing more and more from Darwinism. It is a fact worthy of special mention that the opposition to Darwinism today comes chiefly from the ranks of the zoologists, whereas thirty years ago large numbers of zoologists from Jena associated themselves with the Darwinian school, hoping to find there a full and satisfactory solution for the profoundest enigmas of natural science.

The cause of this reaction is not far to seek. There was at the time a whole group of enthusiastic Darwinians among the university professors, Haeckel leading the van, who clung to that theory so tenaciously and were so zealous in propagating it, that for a while it seemed impossible for a young naturalist to be anything but a Darwinian. Then the inevitable reaction gradually set in. Darwin himself died, the Darwinians of the sixties and seventies lost their pristine ardor, and many even went beyond Darwin.

Above all, calm reflection took the place of excited enthusiasm. As a result it has become more and more apparent that the past forty years have brought to light nothing new that is of any value to the cause of Darwinism. This significant fact has aroused doubts as to whether after all Darwinism can really give a satisfactory explanation of the genesis of organic forms.

The rising generation is now discovering what discerning scholars had already recognized and stated a quarter of a century ago. They are also returning to a study of the older opponents of Darwinism, especially of Wigand. It is only now, many years after his death, that a tribute has been paid to this distinguished savant which unfortunately was grudgingly withheld during his life. One day recently there was laid before his monument in the Botanical Garden of Marburg a laurel-wreath with the inscription: "To the great naturalist, philosopher and man." It came from a young zoologist at Vienna who had thoroughly mastered Wigand's great anti-Darwinian work, an intelligent investigator who had set to work in the spirit of Wigand. Another talented zoologist, Hans Driesch, dedicates to the memory of Wigand two books in rapid succession and reprehends the contemporaries of that master of science for ignoring him. O. Hammann abandons Darwinism for an internal principle of development. W. Haacke openly disavows Darwinism; and even at the convention of naturalists in 1897, L. Wilsen was allowed to assert without contradiction that, "anyone who has committed himself to Darwinism can no longer be ranked as a naturalist."

These are all signs which clearly indicate a radical revolution, and they are all the more significant since it is the younger generation, which will soon take the lead, that thinks and speaks in this manner. But it is none the less noteworthy that the younger naturalists are not alone in this movement. Many of the older men of science are swelling the current. We shall recall here only the greatest of those whom we might mention in this connection.

Julius von Sachs, the most gifted and brilliant botanist of the last century, who unfortunately is no longer among us, was in the sixties an outspoken Darwinian, as is evident especially from his *History of Botany* and from the first edition of his *Handbook of Botany*. Soon, however, Sachs began to incline toward the position assumed by Naegeli; and as early as 1877, Wigand, in the third volume of his great work, expressed the hope that Sachs would withdraw still further from Darwinism. As years went by, Sachs drifted more and more from his earlier position, and Wigand was of opinion that to himself should be ascribed the credit of bringing about the change. During his last years Sachs had become bitterly opposed to Darwinism, and in his masterly "Physiological Notes" he took a firm stand on the "internal factors of evolution."

During recent years I had the pleasure of occasional correspondence with Sachs. On the 16th of September, 1896, he wrote me: For more than twenty years I have recognized that if we are to build up a strictly scientific theory of organic structural processes, we must separate the doctrine of Descent from Darwinism. It was with this

intention that he worked during the last years of his life and it is to be hoped that his school will continue his researches with this aim in view.

The tendency among naturalists to return to Wigand is well exemplified in an article contributed to the "Preussischen Jahrbuecher" for January, 1897, by Dr. Karl Camillo Schneider, assistant at the zoological Institute of the University of Vienna. This article which is entitled *The Origin of Species*, pursues Wigand's train of thought throughout, and whole sentences and even paragraphs are taken verbatim from his main work. This, at all events, is a very instructive indication of the present tendency which deserves prominence: and its significance becomes more evident when we recall how the work of Wigand was received by the non-Christian press a quarter of a century ago. It was either ridiculed or ignored. The two methods of treatment were applied to his writings which are always readily employed when the critic has nothing pertinent to say. It is interesting to note that Darwin himself employed this method. Wigand once told me that he had sent Darwin a copy of his work and had addressed a letter to him at the same time merely stating that he had sent the book, making no reference to the line of thought contained in it. Darwin answered immediately in the kindest manner that he had not as yet received the book, but when it arrived he would at once make a careful study of its contents. Darwin did not write to him again, and when a new edition of his works appeared, the work of Wigand, the most comprehensive answer to Darwin ever written, was passed over

without even a passing mention. Thus Darwin completely ignored his keenest antagonist.

As has been said, the majority of those who wrote about Wigand ridiculed him: very few regarded him seriously, and even these indulged chiefly in personal recriminations. Thus matters stood twenty-five years ago. Wigand's prediction passed unheeded. That a periodical not having a specifically Christian circle of readers should now publish a condemnation of Darwinism entirely in accordance with the views of Wigand, is a fact which indicates a notable change of sentiment during the intervening years. I should not be at all astonished if many who sneered at Wigand twenty years ago, now read the article in the *Preussischen Jahrbuecher* with entire approval. Ill-will towards Wigand has not altogether disappeared even today. This is evident from the fact that as yet Dr. Schneider does not venture to defend Wigand publicly, nor to acknowledge him as his principal authority. We must be content, however, if only, the truth will finally prevail.