kindle a fire which it is beyond our power to extinguish. Let us consider well our responsibility, that we may not be the means of driving our fellow creatures into temptation. Let us take care that no unhappy wreck can point to us as the cause of her ruin, and if, by the reading of this paper, but one British maid or matron be kept out of temptation, or arrested on the road to ruin, I will not consider that it has been read in vain.

OBSERVATIONS ON THE EFFECTS OF CUCA LEAVES.

By WALTER BERNARD, L.K.Q.C.P.I., Londonderry.

HAVING read the interesting observations of Sir R. Christison on the effects of cuca on himself, as reported in the JOURNAL of April 29th, I determined to try a similar experiment on myself. I therefore procured, from Messrs. Duncan and Flockhart of Edinburgh, a package of the leaves, which I found to be a pretty fair sample of the article, if I may judge by Sir Robert's description, only that the leaves were green rather than "deep green", as in his account, and did not occasion such warmth in the mouth. I selected for the experiment a day with the maximum of fatigue in it. This was Monday, May 22nd, 1876. I was constantly on foot from 8.45 A.M. to 10 P.M., with the exception of an hour for dinner (from five to six o'clock); and my dinner consisted of roast lamb, some vegetables, no stimulants, and was followed by tea at seven o'clock, and mechanical rest, but no sleep up to the hour (12.15 A.M.) when I commenced to prepare for my trial trip. Thus, without food or drink since seven o'clock, I set out at 1 A.M., accompanied by Professor Leebody, analyst for this city, for a twenty-four miles' walk, and the ascent at the end of it of a hill 1,381 feet high. Commencing my journey, I certainly did not feel inclined for much exertion; but after some miles brisk walking, I felt more equal to the work. The renal secretion, noted every two hours by my friend, shows the subjoined results. We did 13½ miles in three hours, giving an average of 4½ per hour. We could have done 4¾ easily, as a smooth level footway extended to this point, but rain fell heavily for the first two hours and a-half, rendering the footpath slippery, and thus interfering with a quicker pace. Up to this time, we did not feel fatigued. Here we commenced, at the end of three hours, to chew forty grains of the cuca. We traversed a very bad hilly road, strewn with loose stones, which considerably impeded our progress. Walking under these difficulties, and now fatigued, we found no material benefit from chewing and swallowing the active principle of the leaves; a doubt, however, remained in my mind as to this conclusion, as I fancied my step, on ascending the little hills, was more elastic, and the feeling of fatigue slightly mitigated. This idea soon ripened into a belief. At six o'clock, and not far from our destination, each of us had a second dose of forty grains. I now resolved to finish well up by giving it a fair trial. Testing my strength to the utmost, and chewing quickly, I advanced towards the hill with a rapid pace, leaving Mr. Leebody in the rear. Arriving at Mamore gap, I made a very rapid ascent of Mamore hill, 1,381 feet high. Hurried breathing and fatigue began to be felt when I was about half-way up. Here I commenced to chew another forty grains; and, before I arrived at the top, though I still continued my rapid pace, power was restored. My breathing was considerably relieved. I felt in excellent spirits, and neither hungry nor thirsty. It was seven o'clock when I arrived at the top, somewhat later than we expected; but the loss of time was mainly due to the zig-zag course I followed in endeavouring to avoid the loose stones. Yet, were it not that along the rough road we were cheered by a beautiful clear morning (for all clouds and threatening of rain had vanished) and an invigorating balmy breeze from off the sea, our arrival would have been somewhat later. I remained ten minutes on the top, admiring the coast line, the entrance to Lough Swilly, the cultivated lands lying low and quite flat at the east of the hill between me and the sea, as well as the grandeur of the Donegal mountains free from haze. I felt now quite refreshed and buoyant, with no sensation of hunger, thirst, or fatigue. On descending, I bounded like a doe, jumping from knoll to knoll. Some short distance down, I met my companion, making for the top. I asked him had the cuca any effect on him? He said not. I offered him another forty grains, but he would not accept it, being somewhat disheartened. He was, however, still chewing what he had remaining of the second forty grains. I left him, and made my way to a house where my servant had put up my horse and vehicle, which followed us during our course. On arriving here, I was cool and comfortable; for soon after I had put on the rapid pace I had become bathed in perspiration from the lumbar region upwards. Gently

retracing my steps from the foot of the hill afforded me time to be come cool.

On leaving home, my pulse was 60; temperature 98 deg. Now the pulse was 94; temperature 96 deg. I waited a quarter of an hour for Mr. Leebody, and was agreeably surprised to find him beginning to change his views as to the efficacy of the leaf. He had now lost almost all feeling of lassitude. But I refer to his own notes, which are appended to this. We had determined to walk home, to give the cuca a fuller and fairer trial; but both being now agreed in thinking that there was good service rendered to us by its use, and that a further prosecution of the experiment would not add much more accurate knowledge to that which we had now gained, we decided to drive—first walking briskly a long high hill—and we arrived at home at 10.30. The greater part of the way home I had a strong taste of the shrub in my mouth, resembling somewhat that of tea. On my arrival, I did ample justice to a good breakfast. I worked unceasingly and willingly all day, and did not feel at all fatigued, and did my work on foot. I had no desire to sleep. Those who knew that I had been walking for so many hours during the night and morning, mentioned that I neither looked jaded nor worn, and I certainly did not feel so. Moreover, I state positively (and this can be substantiated by my wife) that when I have had occasion to sit up watching, I have been fagged and tired the next day, having browache not unfrequently from exhaustion. I felt thirsty at two o'clock, and had a small bottle of Apollinaris water. I dined at five on mutton, pancakes, and four glasses of good Burgundy. At six o'clock, I retired to my room to write out my notes, but felt disinclined for work for the first time during the day. This disinclination was excited by the Burgundy, as alcohol, in any shape or form, has always had this effect upon me. At seven o'clock, I took eight ounces of tea, which so refreshed me that I was able to complete my notes, and finished them at nine o'clock. I took them across the street to compare them with those of Mr. Leebody. I retired to bed at a few minutes after ten o'clock; fell at once into a sound sleep, and awoke refreshed at a quarter to six o'clock. I then had a bath and was dressed at seven, and I feel all right to-day (Wednesday, May 24th).

In May 1873, I walked twenty-seven Irish miles with Mr. Stewart, manager of the Bank of Ireland in Carlow, and Mr. Craig, manager in this city, taking twelve hours to accomplish the journey, and dining and resting; drinking one bottle of porter and a glass of whisky, with a view to assist my progress; and, on another occasion, I did eighteen miles, and took the same amount of stimulants. Long before reaching home, I felt extremely fatigued, and on both occasions did not sleep for the first two or three hours, owing to palpitation and restlessness. Since then, I have found, by experiments on myself, that although a stimulant restores power for the first few miles, it has a strong tendency to induce depression of spirits, lassitude, and disinclination for mental or bodily work. Further, it helps to make me restless in the beginning of the night, waking with a dry tongue in the morning. I had not my usual accompaniments of fatigue on lying down, *i. e.*, palpitation, and a dull aching pain in the left eyebrow. This will lead me to try the effects of cuca as a cardiac tonic.

In conclusion, I may mention that I am of opinion the specimen I received was not so good as that described by Sir Robert Christison, as it was slow in its action, and required a larger quantity to produce good effects. Having many times during my life undergone bodily fatigue from watching, and from long walks, and having suffered effects such as I have before mentioned, I think it is not a hasty generalisation to come to that, on this occasion, the cuca prevented the browache, palpitation, and restlessness, as well as afforded relief, for which it is, in my opinion, becoming justly celebrated.

THE ACTION OF CUCA.

By J. R. LEEBODY, M.A.,

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I HAVE made the following notes of a walk taken by me on May 23rd, in company with my friend Dr. Bernard, for the purpose of testing the properties of cuca.

To insure thorough fatigue on my part, I took, in addition to the exercise involved in my ordinary work, a long row on the river on the afternoon of May 22nd. I had a steady pull of over three hours, for the greater part of the time against wind and tide. The consequence was, that when I went to bed at 10.45 P.M., I was more than usually tired. I slept till 12.15 A.M., and then rose, feeling sleepy and fatigued. At 1 A.M., we started for our walk. Before starting, I ate one ounce of bread, to prevent headache, from which I usually suffer when I take