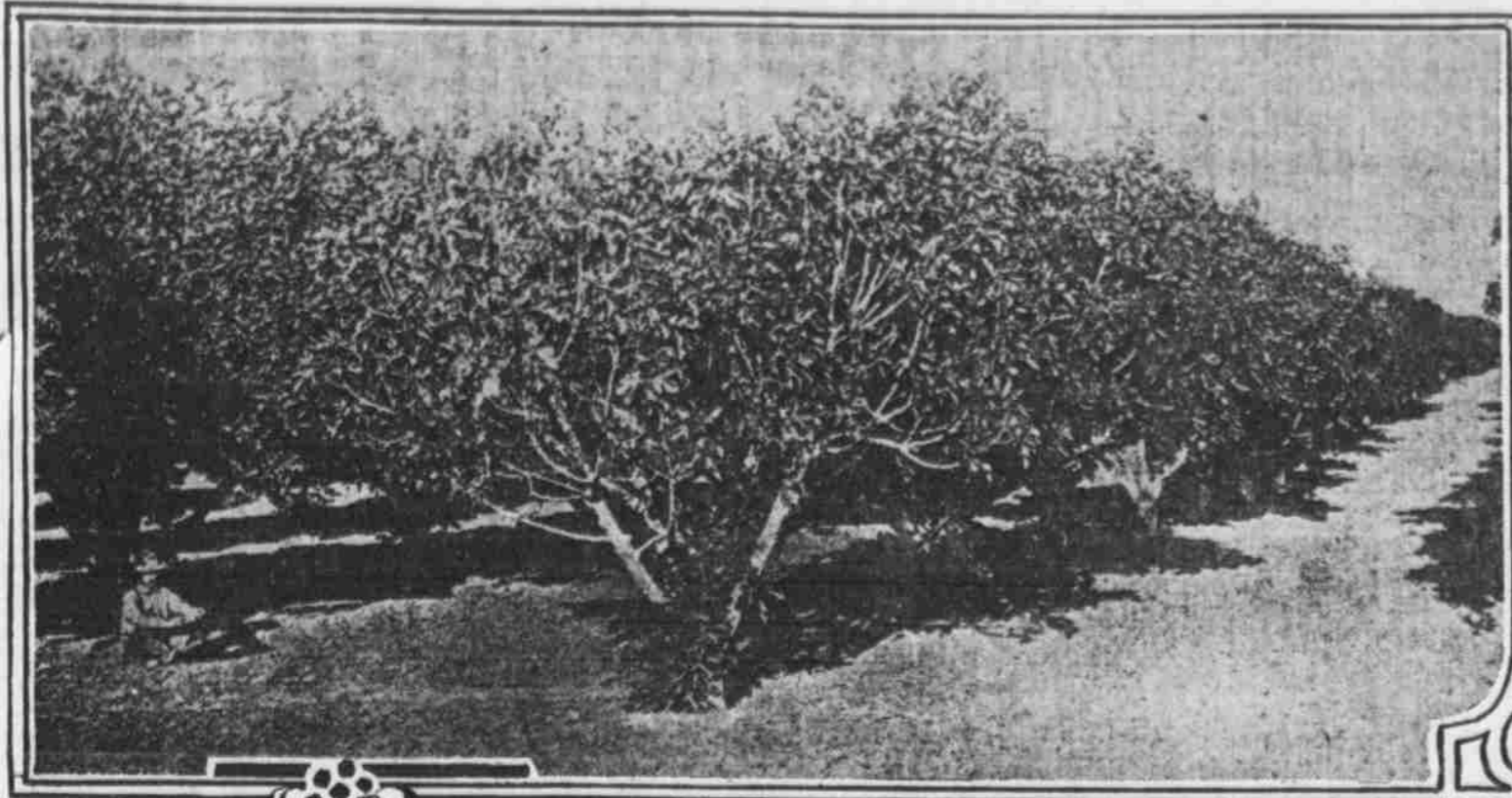


Southwestern "Deserts" Yield Rich Fruits of the Earth



SMYRNA FIG ORCHARD AT FRESNO

(Copyright, 1911, by Frank G. Carpenter.)



WASHINGTON, D. C.—(Special to The Bee.)—Uncle Sam raised enough dates last year to give every man, woman and child in the country a handful and leave some to spare. The amount was 20,000,000 pounds, and the fruit was as fine as that which comes from the oases of the Sahara. Much of it was raised about the Salton sea, in Southern California, where it is so hot that the hens are said to lay boiled eggs and where, as is alleged by others, there is only a sheet of brown paper between it and the lower regions. Other dates were grown in the Rio Grande valley of Texas, and others on the scorching sands of southern Arizona. The Arabs say that the date palm must have its feet in the water and its head in the burning sun.

Those are the conditions in many parts of our great southwest. The sun is white hot, but by irrigation the palms are kept moist, and they produce this delicious fruit, which contains more sugar than any other on earth. These potential date regions are very extensive. I have been inquiring about them of the Agricultural department, and Mr. Walter T. Swingle, who has special charge of this industry, tells me that we have several million acres that will raise excellent dates, and that we could, if we would, supply all the dates that are eaten by man.

The Dates of the Sahara.

But before I give you my talk with Prof. Swingle, let me take you through some of the date countries of the world. Many of our dates come from the Sahara, that great stretch of desert which runs across North Africa, covering almost as much land as the whole United States. I have visited a number of its oases, and have picked dates from the trees.

The oases are garden spots in this vast region of sand and rock. There are 80,000 square miles of them, a territory equal to twice that of Ohio, Kentucky and Virginia, and upon all of them the chief crop is dates. Each oasis is measured, not by its area, but by the number of date trees it contains, and the French of Morocco and Algeria tax the people according to the size of their orchards.

Dates have the same place in the Sahara that our wheat has in the north and cotton in the south. It is the money crop, and the chief support of the people. It is the date that loads the caravans of camels that move to and fro over the desert. It might also be called the bread of the Sahara, for in some places the Arabs eat but little else, the fruit being fed to the camels and even to dogs.

This date stock feed, however, is different from the fruit we have in America. The oases have as many kinds of dates as we have apples. There are more than 100 different date palms in the Sahara, and many others in the Persian gulf region. The dates we eat are full of sugar, and are so soft and juicy that they must be drained before being packed. The favorite date of the Sahara is a dry date, which can be kept a long time, and which is sometimes pulverized and so cooked. Another date is deliciously sweet. It is of a yellow color, and is as plump as a prune before it is pressed.

Persian Gulf Dates.

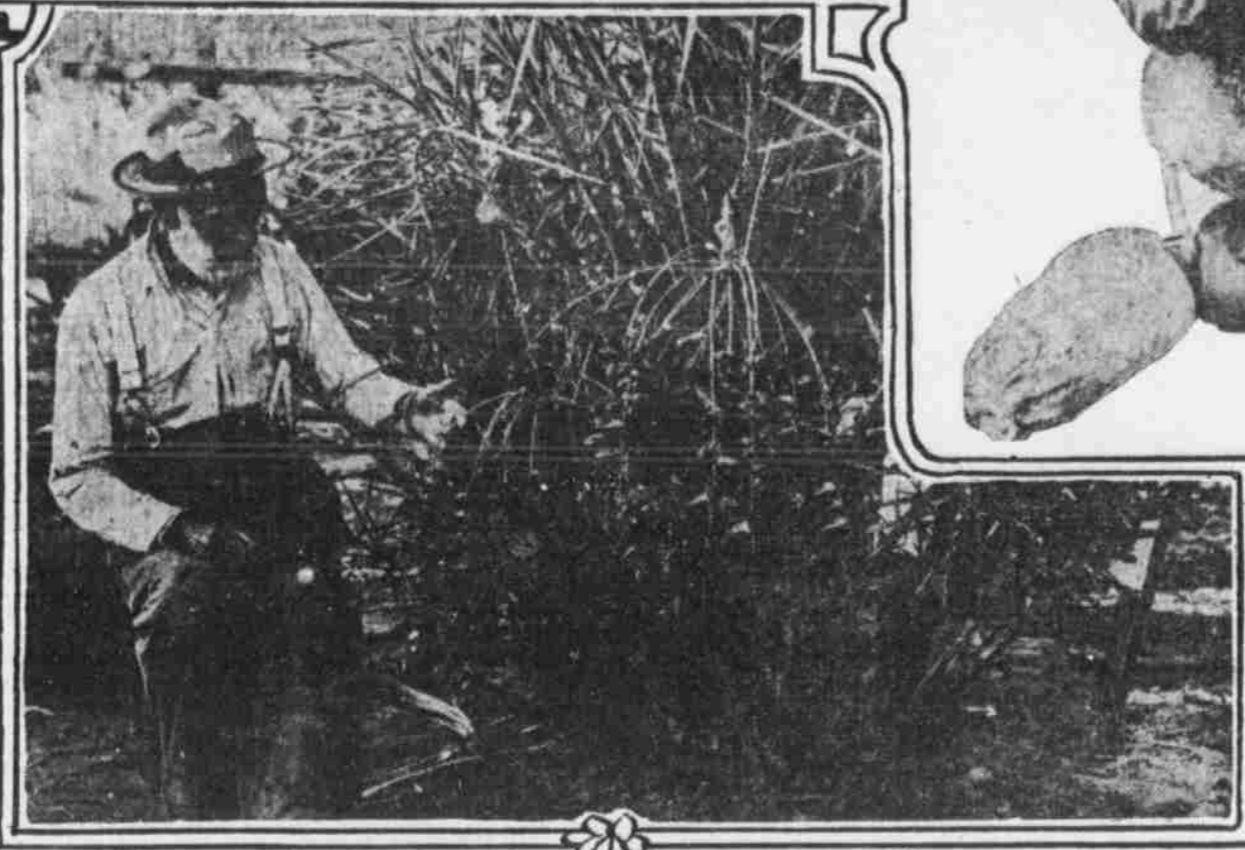
One of the most interesting date regions of the world is about the Persian gulf in the valley of the Euphrates, not far from where the Tower of Babel once stood, and near the supposed location of the Garden of Eden. I have talked about this country with Mr. David Fairchild, the agricultural explorer, who has gone around the world, like a watch spring, scratching its surface for new plants and trees to introduce into the United States. He made a special trip to study the date groves of the Persian gulf, which are still furnishing most of that fruit that comes to America. Mr. Fairchild says there are something like 20,000,000 date palms in that territory, and that an unbroken date forest runs along the Shat-el-Arab, which forms the mouth of the Euphrates and Tigris rivers, for a distance of over seventy miles. That mighty date grove is several miles wide, and it contains altogether about 5,000,000 trees. It is irrigated by the river, the tides backing the fresh water into the canals and giving the roots of each palm a bath twice a day.

The Persian dates are of hundreds of varieties, and Mr. Fairchild heard of some that are said to be seedless. In this respect corresponding perhaps to the naval orange which is now so common all over our country.

Mr. Fairchild sent shoots of several varieties of dates to the United States, and has thus been instrumental in giving us some of the first trees planted in our arid west. He also forwarded date trees from the Fayoum, in Egypt, from Arabia and from other places which he visited during his travels.

Bringing Dates to America.

The man who has done more for date culture in the United States than any other, however, is Mr. Walter T. Swingle, who as a botanist and plant breeder ranks as high as Luther Burbank, the so-called wizard of California. Mr. Swingle has bred new dates, new figs and new citrus fruits, including oranges which can be grown as far north as central Georgia. He has been largely instrumental in introducing the date and the fig into our country, and has also given us the pistachio and other valuable plants of the Mediterranean region. He has been connected with the Department of Agriculture for more than twenty years, and became interested in the introduction of dates and figs during his stay at Naples, where he went to study



JAMES P. REED, A CALIFORNIA DATE GROWER

tropical agriculture about a decade or so ago. He then traveled through Asia Minor and crossed over into Africa, going down into the Sahara. Prior to his visit to the date regions there some seedling date trees had been grown in California and Arizona, and there had been attempts by the department to import shoots or suckers from the date trees of Africa.

The chief way of starting a date grove in the Sahara is to take up the suckers, which sprout out from the trunk of the palm, and plant them. The method of shipping them to the United States was to set them out in tubs near the trees from which they were taken and to allow them to grow for one year. At the end of that time the plant in the tub was sent to New York and thence to the west. This method was costly. The steamships did not like to handle the tubs, and they charged freight at the rate of one ton per tub. The expense was almost prohibitive.

Mr. Swingle conceived the idea of sending the shoots fresh from the tree. He sent to Paris for a bale of a special kind of moss, and with this, after it had been well wet, he wrapped the ends of the suckers. He then tied each up in straw and packed them in ordinary shoe boxes, which he was able to ship at the regular freight rates. It was found that the shoots arrived in Arizona and California in excellent condition. They were transplanted in the date gardens there and rapidly grew.

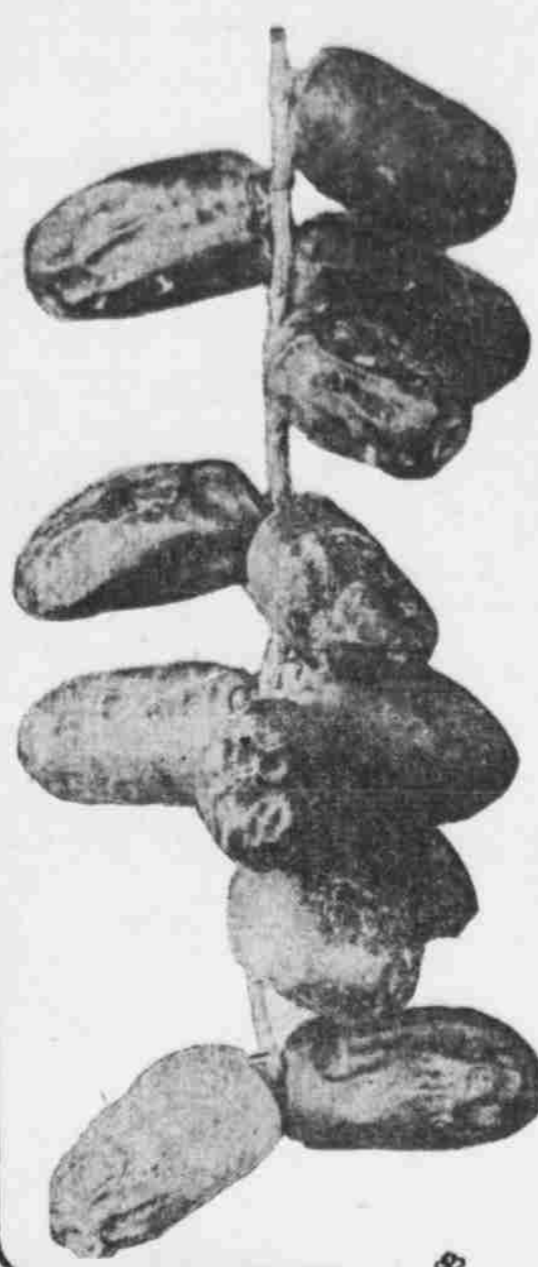
Where Our Date Farms Are.

During his second visit to Algeria, Mr. Swingle made one shipment of over four hundred of these suckers, three-fourths of which became trees, and since then we have had other importations made the same way. Some of the suckers were set out at Tempe, Ariz., not far from Phoenix. Theodore Roosevelt, while president, feasted on dates from those trees and thousands of pounds were harvested from them this year. Others of the suckers went to California, and some have been sent to an extensive date region which is now being tested near Laredo, Tex. Not a few so imported are growing in the Imperial valley of southern California. Mr. Swingle tells me that dates may be grown in California as far north as Sacramento, but that the finest varieties will succeed best about Yuma, Arizona, and on the southernmost edge of California. There is no use attempting to grow them where the temperature falls below 65 Fahrenheit, and the hotter the better. There are some regions in Nevada where dates might grow, and this is so also in New Mexico and all along the hot Rio Grande river in Texas with the exception of a short distance near the mouth where the moist winds from the Gulf of Mexico make the summer too cool to ripen the fruit.

Breeding Fine Dates

It is a singular thing that the fruit seems to thrive on an alkali soil. In some of the orchards which are now growing the land is so salty that weeds will not spring up on it and nothing but desert plants can be grown.

Mr. Swingle expects that the United States will some day produce dates superior to any now grown. The Arab has tried to perpetuate the old varieties, using the shoots or suckers of the date trees rather than seedlings for planting new groves. This has been the same in Persia and elsewhere. It is different in our date gardens of the west. The scientists there are taking the best of the old varieties and breeding new ones; they have hundreds of different kinds and are producing others each year. The trees are male and female, and Uncle Sam's match-makers are marrying the best specimens of each variety with an idea that the children that come from the seeds will have the best qualities of each parent. With this in view the Department of Agriculture is sending out thousands of seeds and urging the farmers of those hot, arid regions to set out date gardens. This is comparatively cheap when the trees are grown from the seeds and the date orchards, once in bearing, prove enormously profitable. The trees begin to fruit in three years and the dates sell at retail from 10 to 50 cents a pound, according to quality. The average yield of a Deglet Noor palm is put at from 88 to 132 pounds, and an estimate of \$150 profit per acre a year is not out of the way. Even



DRY OR BREAD DATES FROM THE CA GARDEN, CAL



MESSRS. FAIRCHILD AND SWINGLE INSPECTING SEEDLINGS

the male fig tree to the female fig tree and thereby fertilizing the fruit. Without it is fertilized the fruit is not good; it will not stay on the tree and is of no commercial value whatever.

Now the blastophagas is like the boll weevil in that it will feed upon only one crop. The boll weevil will eat nothing but cotton. The blastophagas can live on nothing but the Smyrna fig; it can be born only in the capri fig, and the figs of the male tree are seemingly good for nothing but to serve as a breeding ground for this insect.

Fertilized by Insect Enemy.

While talking about this matter with Mr. Swingle he drew for me two pictures of the blossoms of the male and female trees; each is of the shape of a bell, with a narrow mouth, minute flowers being on the inside of the bell. In the male tree the flowers are so short that when the Mm. Blastophagas sticks in her tail and deposits the eggs they are close enough to become a part of the fruit, and they soon hatch therein and crawl forth as wasps like their mother. If one of these capri figs is cut open before it is ripe it will be seen to be full of grains which look much like seeds. These grains are minute galls, each of which contains a fig insect. When the insects are ready to bite their way out of the galls the mouth of the capri fig opens and a ring of male flowers situated below it begin to shed pollen and carry it to the female flowers which line the young budding figs on the female tree. The dusting of the female flowers with pollen causes the fruit to set and to bear fertile seeds, which give the flavor and make the Smyrna fig so delicious.

Now these flowers about the figs on the female trees are longer than those on the male trees. They are so long that when the wasp puts its tail in and lays its eggs they do not reach to the bottom and the eggs dry up to nothing. However, as the blastophagas lays she drops this pollen on the blossoms and fertilizes the fruit. The flowers on the figs of the male tree are shorter, and the eggs reach the fruit and speedily hatch. The work of laying the eggs on the

female trees is a deception practiced by nature on the wasps, but it works nevertheless, and such as lay their eggs on the flowers of the male tree are enough to perpetuate the race for the figs of the future.

How We Got the Blastophagas.

The people of California knew about this insect and tried to get it for a long time before they succeeded. Indeed, our knowledge of it dates back into antiquity. Herodotus refers to caprification in some of his writings in the fifth century, before Christ, and Aristotle speaks of it in his history of animals. It was well known throughout the orient, and it has been carried from Asia Minor to Africa, so that the Moors and Algerians raise their figs in this way. In Smyrna, the fig growers cut the male figs containing the insects in halves and string them on wire sticks, and then throw them up into the female trees, and the same is now being done in our fig orchards.

As to the introduction of the insect into California, this was attempted twenty-one years ago, but it was not successful. During the eight or nine years following other attempts were made and failed, and then Prof. Swingle, having spent a long time in the study of the insect and its methods of working, sent some capri figs, whose cut stems had been waxed and which were wrapped in tin foil, to California. The wasps came out, but it was not the right time of year for the female blossoms, and another attempt was made in 1899. This was successful, and to make a long story short, the blastophagas began to breed by the millions a year. They are now to be found in the male trees of all the fig orchards, and we are raising fruit that will compete with that of Smyrna in the world's markets.

Breeding New Figs.

At the same time the Smyrna fig is being bred, and new figs created, the very best figs are being married, and new varieties are coming into being. One of these has a gum drop in its mouth, which seals up the place where rain is liable to go in and rot the fig. This is known as the Rixford fig. It is a fruit which practically cans itself, and therefore may be guaranteed clean, without and within. Another self-sealing variety was discovered three years ago; after two soaking rains had spoiled the figs on the adjoining trees of a different variety. Cuttings of these varieties are being distributed to all who will plant three seedling fig trees for every cutting received.

The Maslin Fig Orchard.

One of the great breeding grounds for new figs is the Maslin fig orchard in Placer county, Cal. This is now a government station, being rented to Uncle Sam for a nominal sum by the Southern Pacific railroad. It contains 199 fig trees, which were planted from the seeds of the best imported Smyrna figs by E. W. Maslin, the seeds having been sown almost a quarter of a century ago. Prior to that there had been attempts to raise Smyrna figs in California, but owing to non-caprification and other reasons they were all unsuccessful. Mr. Maslin thought the Turks were sending us bad seeds, and so he wrote to Thurber & Co., the well known grocers of New York, to ship him a box of their very best Smyrna figs, as he wanted to plant the seeds. They did so, and having bought this plantation he gave up his office and attempted to make money orcharding. These seeds sprouted and he got 153 trees. Later on he found that his figs would not fruit, and he eventually had to give up his orchard and the estate connected with it.

In the meantime Mr. Swingle tried to buy the orchard for the bureau of plant industry of the United States Department of Agriculture, but the new owner asked an extravagant price, whereupon the title was investigated and was found to lie in the Southern Pacific railroad, the orchard being on the right of way. The matter was referred to the railroad authorities and they being glad to promote the fruit industry leased the land to the United States government for an indefinite period for \$1 per acre per year.

In that orchard there are now seventy-four male trees and sixty-five female trees. All are twenty years old. From the seedlings have sprung up a dozen valuable new varieties, some of which are unequalled by any that we have imported from the best fig-growing regions of Asia Minor, North Africa and Europe. In addition the department has several thousand other seedlings produced from the finest varieties of figs and these are being distributed to fig growers in different parts of the west. The result will be that the United States will eventually not only raise all its own figs, but that it will have the best figs that can be produced.

FRANK G. CARPENTER.

National Pastime Trifle Expensive



NO EXPENSE has been spared by the owners of the clubs in the two major leagues to make the season one of the greatest in the history of base ball, says the Chicago Tribune. Considerably more than \$500,000 has been expended in preparing for the season. The figure will be nearer to \$1,000,000 if the repairs to the ball parks and erection of new stands are taken into consideration.

By far the greatest expense borne by the owners has been the cost of the new players, obtained in an effort to strengthen the teams for the coming campaign. Each of the sixteen clubs in the big leagues signed on an average of twenty young players, stars of the minor leagues. These players cost the owners about \$300,000 in cash, this money going to the coffers of the minor league owners who had the youngsters under contract. Some of these rising young players were sold with the understanding that a bonus should be paid if they were retained in the service of the major league clubs after being tried out. The bonuses which must be paid under these circumstances by the major leagues amount to nearly \$100,000. These youngsters consequently represent an investment of approximately \$400,000.

Yet this does not begin to cover the total expenses of the club owners. The players obtained must be tried out in the southern training camps in order that their real worth may be discerned. While the regular players run up the expenses of these camps as well as the recruits, the latter from one of the chief concerns of the managers, and it has been estimated that the club owners have expended \$200,000 in maintaining training quarters this spring in order to find out whether the players who cost them \$400,000 are worth anything or not.

John I. Taylor, president of the Boston Red Sox, chartered special Pullman cars to take his squad of forty odd players to the Pacific coast and back, at great expense. The White Sox special, which was chartered by President Comiskey of the Chicago Americans, cost \$10,000, and only carried the team to Texas and back, stopping over for exhibition games. All the other clubs maintained expensive training camps in the south.

In order to get the most brilliant youngsters in the minor leagues every major league club keeps two or three salaried scouts traveling from one end of the country to the other, going over the "bush" leagues with a fine tooth comb in order that no "future great" may escape. Few there are, indeed, who are overlooked by the eagle eyes of the cleverest judges of base ball players. The expense of these scouts is charged up as well against the recruits, and would probably amount to another \$100,000 for sixteen clubs.

In the neighborhood of \$700,000, therefore, it has cost the managers of the big leagues to look over the best base ball talent which appeared in the minors last season. When all is said and done it seems to be spent more to satisfy their curiosity than anything else. If one or two players out of the twenty odd signed by a club are found worthy to warm the bench on which the stars of a team sit a manager feels that he is fortunate indeed. The rest are turned back to the minors and sold at a great sacrifice. As castoffs of the big leagues they are not considered to be worth much, and minor league owners are not prone to paying the fancy prices which they demand from their major league compeers.

This immense sum is annually spent and small is the tangible return. Very often a major league manager will find a youngster whom he can keep, but, after all, when he knows that there is no star among the bush league teams he would rather save money. It is a defensive practice, as well as offensive, this obtaining of recruits. While one manager may not need a brilliant infielder, he likes to keep another manager from getting him. The real essence of the matter is nothing less than a never ceasing search for another Christy Mathewson, another Ty Cobb or another Honus Wagner. If ten years of hunting reveals a star of this type and nothing else, the efforts of the manager have been rewarded beyond price, for the value of such players to a club can hardly be reckoned in dollars and cents. The sin which can never be forgiven a manager is to let a good man go when he might have been obtained even at high cost. The big prizes in star players are few enough and they cost enormously.